Supreme Court, U. S.
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IN THE

SUPREME COURT OF THE UNITED STATES

October Term, 1977 No. 5, Original

UNITED STATES OF AMERICA,

Plaintiff

v.

STATE OF CALIFORNIA,

Defendant

Report of Alfred A. Arraj,
Special Master

August 20, 1979

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I. INTRODUCTION: PROCEDURAL HISTORY

A. *Prior Proceedings*

The United States of America commenced this action against the State of California in 1945. The ultimate question was and remains whether the right to exploit natural resources which may be found in the submerged lands off the California coast belongs to the United States or California. In 1947 the Supreme Court decreed that such right inheres in the United States as to all submerged lands extending seaward of the ordinary low water mark on the California coast. *United States v. California*, 332 U.S. 804, 805 (1947). *See also United States v. California*, 332 U.S. 19 (1947). Subsequently the Court appointed the late William H. Davis as Special Master in order to delineate the ordinary low water mark along certain disputed segments of the California coast.

Special Master Davis filed his report with the Court in November of 1952, 344 U.S. 872. Before the Court was able to act on that report, however, the Congress of the United States enacted the Submerged Lands Act of 1953 (the Act), 67 Stat. 29, 43 U.S.C. §§ 1301, *et seq.* By virtue of that Act the United States, in effect, quitclaimed to California whatever interest the federal government may have had in and to all lands and natural resources lying three geographic miles[1] seaward of the California coast line. § 3(b)(1) of the Act, 43 U.S.C. § 1311(b)(1). Congress subsequently enacted the Outer Continental Shelf Lands Act, 67 Stat. 462 (1953), 43 U.S.C.§§ 1331, *et seq.*, which declared that

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[1] As used in this report the term "miles" shall refer to geographical miles unless otherwise specified. Precise measurements are not presently at issue. As will be set forth more fully, *infra*, the questions before me concern identification of the "coast line." Once this is accomplished I anticipate that the parties will be able to agree upon the location of the three mile line without resort to litigation. *See* note 4, *infra*.

the United States owned all submerged lands seaward of those lands granted to the states by the Submerged Lands Act. For the time being these statutes settled the dispute and no further action was taken in the lawsuit.

By 1963, however, technology for recovering resources from submerged lands had advanced to the point where it became necessary to refine and precisely delineate the boundary between federal and state submerged lands. The dispute is a question of locating the coast line, from which the three mile boundary is measured. In order to supplement the definitions and guidance provided in the Act, the Supreme Court turned to the provisions contained in the Geneva Convention on the Territorial Sea and the Contiguous Zone (the Geneva Convention), T.I.A.S. No. 5369, 15 U.S.T. 1606 (1958). *United States v. California,* 381 U.S. 139 (1965). Since the latter opinion was issued the Court has entered three decrees, 382 U.S. 448 (1966), 432 U.S. 40 (1977), and 436 U.S. 32 (1978).

B. *Reference to the Special Master*

During the October Term, 1977, the parties filed cross motions for entry of a fourth supplemental decree. The motions frame three issues for resolution at this time. First is the location of the coast line at the Port of San Pedro, east of the eastern end of the Long Beach Breakwater in the mouth of the Port. Second is the location of the coast line at the mouth of San Diego Bay. Third is the location of the coast line at fifteen piers[2] and the Rincon Island complex. The Appendix contains diagrams depicting the

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[2] The Sharp Beach Pier, Morro Strand Pier, the Port Orford Pier, the Ellwood Pier, the Santa Barbara Biltmore Hotel Pier, the Carpenteria Pier, the Venice Pier, the Manhattan Beach Pier, the Hermosa Beach Pier, the Huntington Beach Pier, the Newport Beach Pier, the Balboa Beach Pier, the Oceanside Pier, the Ocean Beach Pier, and the Imperial Beach Pier. Originally the parties included a sixteenth pier, the El Segundo Pier, with this list. That pier has, however, now been physically removed from the California coast and is no longer an issue in this litigation.

disputed areas. These diagrams are for illustrative purposes only, and are not intended to be precise, scaled representations of the areas depicted.

Although the basic governing legal principles are no longer disputed, the motions now before the Court pose certain factual disputes which must be resolved in order to act on the motions. Accordingly, and at the request of both parties, the Court determined to appoint a Special Master for the purpose of taking evidence and making recommendations based on that evidence. The undersigned Special Master was appointed and commissioned on August 10, 1978.

C. *Proceedings before the Special Master*

Counsel attended a prehearing conference in my Denver, Colorado, chambers on September 5, 1978. I then joined counsel for an inspection tour along the California coast on November 7-9, 1978. Discovery proceeded in an orderly fashion without the need for my intervention. I received evidence[3] in New York City, New York, on April 17 and 18, 1979, and in Denver on May 7-9, 1979. Counsel have briefed the evidence and the issues, and the following shall constitute my findings, conclusions, and recommendations to the Supreme Court.

II LEGAL BACKGROUND

The operative provision of the Act is § 3(b)(1), 43 U.S.C. § 1311(b)(1). That section provides as follows:

> The United States hereby releases and relinquishes unto said States and persons aforesaid, except as otherwise reserved herein, all right, title, and interest of the United States, if any

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[3] Counsel presented the direct "testimony" of three expert witnesses in the form of written opinions, Plaintiff's Exhibit 12, Defendant's Exhibit C, and Defendant's Exhibit Y. As to these witnesses the evidentiary hearings were used to introduce the written testimony and any related exhibits, and for cross examination. Because of the technical nature of the testimony involved I found this to be a very satisfactory method of receiving the evidence.

> it has, in and to all said lands, improvements, and natural resources....

"Said lands, improvements, and natural resources" are those set forth in § 3(a)(1), 43 U.S.C. § 1311(a)(1):

> It is hereby determined and declared to be in the public interest that title to and ownership of the lands beneath navigable waters within the boundaries of the respective States, and the natural resources within such lands and waters ... be ... recognized, confirmed, established, and vested in and assigned to the respective States....

The term "boundaries" is defined in § 2(b) of the Act, 43 U.S.C. § 1301(b):

> The term "boundaries" includes the seaward boundaries of a State ... but in no event shall the term "boundaries" or the term "lands beneath navigable waters" be interpreted as extending from the coast line more than three geographic miles into ... the Pacific Ocean....

See also § 4 of the Act, 43 U.S.C. § 1312.

Congress, then, granted the State of California all submerged lands lying three miles seaward of the state's coast line. *United States v. California,* 381 U.S. 139, 148 (1965). As has been amply demonstrated during the proceedings before me the parties have no difficulty drawing a line three miles seaward of the coast line once that line has been established.[4] The disagreement lies in locating the coast line.

The Act defines coast line in § 2(c), 43 U.S.C. § 1301 (c):

> The term "coast line" means the line of ordinary low water along that portion of the coast which is in direct contact with

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[4] The three mile line is drawn by placing a divider or other measuring tool on each point of the coast line and swinging an arc three miles seaward. The line created by the resulting arcs represents the federal-state boundary. *See, e.g.,* testimony of Dr. Robert D. Hodgson, transcript of the Denver hearing at 164; testimony of Professor Eliezer Ereli, Defendant's Exhibit Y at 7; and Plaintiff's Motion. Proposed Decree, and Memorandum at 5, n. 3.

> the open sea and the line marking the seaward limit of inland waters.

There are apparently two distinct low water lines along the California coast, and the Supreme Court has determined that the ordinary *lower* low water line should be used when implementing the definition of coast line. 381 U.S. at 176.

The parties do not dispute the precise location of the ordinary or mean lower low water line. Rather, two of the issues before me, San Diego Bay and the Port of San Pedro, involve locating the line which delimits the seaward limit of those inland water bodies. The third issue, the fifteen piers and Rincon Island, involves the question of whether the coast line follows the mean lower low water line of the piers and Rincon Island or the mean lower low water line of the natural shore.

The statutory definition of coast line provides a starting point for any analysis, but little more. For example, the Act does not define what is meant by the term "inland waters." In order to answer the questions left unresolved by the statute the Supreme Court has turned to the aforementioned Geneva Convention. *See United States v. California,* 381 U.S. 139, 165 (1965), and *United States v. Louisiana,* 394 U.S. 11, 16, 34 (1969). The Geneva Convention sets forth principles and definitions to be used in delimiting a nation's territorial sea. Locating the nation's coast line plays the same key role in determining the boundary of the territorial sea as locating California's coast line does in determining the boundary between California and the United States.[5] Four provisions of the Geneva Convention, in particular, are relevant to the issues presented for my consideration. Article 7(2) defines the term bay, a body of inland water, as follows:

> A Bay is a well-marked indentation whose penetration is in such proportion to the width of its mouth as to contain landlocked waters and constitute more than a mere curvature of the coast. An indentation shall not, however, be regarded as a bay unless its area is as large as, or larger

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[5] The Geneva Convention uses the coast line as a baseline for measuring the breadth of the territorial sea.

than, that of the semi-circle whose diameter is a line drawn across the mouth of that indentation.

Article 7(4) describes how to draw the closing line of a bay, or the line demarking the seaward limit of the bay's inland waters:

> If the distance between the low-water marks of the natural entrance points of a bay does not exceed twenty-four miles, a closing line may be drawn between these two low-water marks, and the waters enclosed thereby shall be considered as inland waters.[6]

Article 3 provides that

> The normal baseline for measuring the breadth of the territorial sea is the low water line along the coast as marked on large-scale charts officially recognized by the coastal state.

Finally, Article 8 provides that

> For the purpose of delimiting the territorial sea, the outermost permanent harbor works which form an integral part of the harbor system shall be regarded as forming part of the coast.

With this background of governing legal principles in mind I now turn to an examination of each issue presented by the pleadings.

III THE PORT OF SAN PEDRO

The Supreme Court's 1966 decree defined the inland waters of the Port of San Pedro by using the San Pedro Breakwater, the Middle Breakwater, the Long Beach Breakwater, and straight lines across the two gaps between the three breakwaters as the seaward limits of the Port. 382 U.S. 448, 451. The breakwaters do not, however, enclose the entire port, and the 1966 decree

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[6] Both of the bays in question will involve lines of less than twenty-four miles, regardless of which party prevails.

expressly left undecided the question of where the closing line should be drawn from the eastern terminus of the Long Beach Breakwater. 382 U.S. at 451. The United States would draw the line from the Long Beach Breakwater to the Alamitos Bay Jetty. California would draw the line to the Anaheim Bay East Jetty. *See* National Ocean Survey Chart 18749, Defendant's Exhibit HH. *See also* Appendix Figures 1 and 1a. The parties agree that whichever way the line is drawn the Port of San Pedro is a juridical bay, a port, and a harbor as those terms are used in the Geneva Convention and earlier Supreme Court decisions in this litigation.[7] The only question for resolution is which of the two closing lines correctly delineates the seaward limit of the Port's inland waters under the applicable standards. 382 U.S. at 449.

The fact question may be phrased in a number of ways. Under paragraph 4(b) of the 1966 decree the issue is whether the Alamitos Bay Jetty or the Anaheim Bay East Jetty constitutes the Port's "outermost permanent harbor works." 382 U.S. at 450. *See* note 7, *supra,* for definitions relating to harbor and harbor works. Paragraph 4(d) of the 1966 decree puts the question in terms of where the bay's "entrance" lies. 382 U.S. at 450-51. Under paragraph 5 of the 1966 decree the question is which jetty constitutes the "outermost extension" of the Port's "headlands." 382 U.S. at 451. Article 8 of the Geneva Convention poses the same question as paragraph 4(b), which jetty constitutes the Port's outermost permanent harbor work. Finally, Article 7(4) of the Geneva Convention tracks paragraph 4(d) by posing the issue of what constitutes the bay's natural entrance points. While each of the five statements of the issue provides a framework in which to approach the task at hand, I think it important to continually remember the broader framework of the case — the goal is to

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[7] The following definitions apply throughout this report. A port is any place where passengers or cargo may be transferred between ship and shore. A port may or may not be part of a harbor, which is a haven providing safe anchorage and sheltering for boats from weather conditions prevailing on the open sea. *See, e.g.,* testimony of William J. Herron and Dr. J. Richard Weggel, transcript of the Denver hearing at 253-56, 406-08, and 410. *See also* Shalowitz, *Shore and Sea Boundaries,* Vol. 1 (1962), at 291. Harbor works and systems are the structures incident to the harbor, such as navigational jetties, protective breakwaters, and piers for accessing vessels. *See United States v. Louisiana,* 394 U.S. 11, 36-37 (1969).

determine where the Port's inland waters stop and the open sea begins.

The United States arrived at its proposed closing line by resort to what it calls the "shortest distance test."[8] Quite simply, the federal government would draw the closing line by drawing the shortest possible line from the eastern terminus of the Long Beach Breakwater to the shore. Using a computer, the Geographer of the Department of State determined that the line to the Alamitos Bay Jetty was the shortest possible line. Although this method is remarkable for its simplicity, it completely ignores the framework which the 1966 decree provides for approaching the issue, as discussed in the previous paragraph. That decree is the law of this case and is binding on both the parties and myself. With all due respect to the Department of State, I must approach the issue from the frame of reference created by the earlier decree, and not from the context of a "shortest distance test" which has not been sanctioned in earlier Supreme Court decisions.

Viewing the issue in the framework of paragraphs 4 and 5 of the 1966 decree, I find that the gap between the Anaheim Bay Jetties and the Long Beach Breakwater constitutes an entrance to the Port of San Pedro. Paragraph 4(d) of the 1966 decree, 382 U.S. at 450-451. The San Pedro Bay is not one isolated harbor or bay which happens to contain facilities for loading and off-loading ships. Rather, the Bay contains the entire Los Angeles area port system. This includes the Anaheim Bay facilities at Seal Beach, the Seal Beach Municipal Pier, the San Gabriel River mouth, the Long Beach Marina and Marine Stadium at Alamitos Bay, Belmont Shore, the Belmont Pier, extensive mooring[9] facilities in San Pedro Bay proper, Long Beach, the Queensway Bay and

[8] Both parties agree that the so-called "bisector of the angle test," *see* paragraph 5 of the 1966 decree, 382 U.S. 451, cannot be used on San Pedro Bay because of the particular geographic features involved. The United States thus turned to the "forty-five degree test," which also cannot be used on San Pedro Bay, and the "shortest distance test." *See* testimony of Dr. Robert D. Hodgson, transcript of the Denver hearing at 117-19.

[9] Mooring is tying a ship to a pre-existing anchorage system, thus obviating the need to use the vessel's own anchor. Berthing, by contrast, is tying to a wharf, pier, dock, or other structure. *See* testimony of William J. Herron, transcript of the Denver hearing at 312-13.

Flood Control Channel at Long Beach, the extensive federal facilities at Terminal Island,and the very extensive port facilities at Los Angeles, Wilmington, and the City of San Pedro. *See, e.g.* National Ocean Survey Chart 18749, Defendant's Exhibit HH, for an aerial "view" of the Port. There are two other entrances to the Port, created by navigational channels in the breakwaters, which appear to handle the major volume of commercial shipping into and out of Los Angeles. *See 7 United States Coast Pilot,* Plaintiff's Exhibit 17, 126-35. This fact does not, however, preclude the existence of a third entrance between the eastern end of the Long Beach Breakwater and the Anaheim Bay Jetties.

The integrated nature of the Port of San Pedro is amply demonstrated by the United States Navy's facilities within the bay area. The Navy maintains two compounds within the Port which are used, together, to service ships stationed in the vicinity of southern California. When a ship containing ammunition is due for service or repairs it moors in one of the two restricted "explosive anchorage" areas. One is located inside Anaheim Bay; the other is located in San Pedro Bay proper, due north of the Long Beach Breakwater. *See* National Ocean Survey Chart 18749, Defendant's Exhibit HH. Barges from the Naval Weapons Station in Anaheim Bay off-load the ammunition for storage in the Weapons Station, and the ship then proceeds to the Naval Shipyard at Terminal Island for the necessary work. The procedure is reversed at the conclusion of repairs. Naval vessels are processed into or out of the Port in this manner on the average of one per day. Both the shipyard and the weapons station function under a common chain of command. *See* Defendant's Exhibit R. Although the Navy need not distinguish between inland waters and the territorial sea in order to service its vessels, it is clear that the service system contemplates that the area from Anaheim Bay westward is one unified harbor system. The Anaheim Bay Jetties thus constitute the outermost permanent harbor works within the meaning of paragraph 4(b) of the 1966 decree, 382 U.S. at 450. *See also* note 7, *supra.*

Implicit in the Supreme Court decrees and Geneva Convention is the principle that closing lines across river mouths, ports, bays, and other bodies of inland water shall be straight. *See, e.g.,* paragraphs 4 and 5 of the 1966 decree, 382 U.S. at 450-51, Articles

7(4) and 13 of the Geneva Convention, and paragraph 1(a) of the 1977 decree, 432 U.S. 40. I recognize that the closing line across the Port of San Pedro will not be straight whichever way the line is drawn. That result is impossible to achieve because, on the one hand, the previously decreed closing line at the western end of the Port follows the breakwaters, which are not straight, and on the other hand, even the Anaheim Bay East Jetty will require a slight angle off of the breakwater. A line drawn to the Anaheim Bay East Jetty will, however, most closely approximate the ideal straight closing line. If one stands back and views the Port in context of the coast's natural curvature to each side of the bay, California's proposed closing line more closely "fits" these curvatures than does the closing line proposed by the United States. A boundary line which tracks a coast line will never, of course, be entirely straight or regular. The straight line requirement is intended, nevertheless, to eliminate such articifical boundaries as proposed by the United States.

Thus far I have conducted my analysis by following the dictates found in *United States v. Louisiana,* 394 U.S. 11, 17-35 (1969). That is to say, I have confined my consideration to an analysis of the physical and factual characteristics of the Port of San Pedro in light of the definitions and guidance found in the Act and the Geneva Convention. I have not considered the delineation of inland waters used by the United States for navigation purposes. *See United States v. Louisiana,* 394 U.S. at 17-19. Although the Supreme Court has held that lines delineating inland waters for navigation purposes are not to be taken as representing closing lines for purposes of the Submerged Lands Act and the Geneva Convention, 394 U.S. at 35, I nevertheless find that the federal government's inland water navigation lines do shed some light on the questions of what constitutes the entrance to and the outermost permanent harbor works of the Port of San Pedro. Because this may appear to be a departure from the Supreme Court's opinion in *United States v. Louisiana,* 394 U.S. at 17-35, I will set forth my two reasons for considering these navigation lines before actually doing so.

In the first place, the law has undergone dramatic changes since the Supreme Court issued the *Louisiana* opinion in 1969. Historically the United States has operated with two different

systems of navigation rules. Domestic law provided one set of regulations governing navigation on "American waters," and international law provided another set for the "high seas." *See, e.g., United States v. Louisiana,* 394 U.S. at 17-19, and Discussion of Regulations, 42 Fed. Reg. 35782-84 (1977). In November of 1976, however, the United States deposited its instrument of accession to the Convention on the International Regulations for Preventing Collisions at Sea, T.I.A.S. No. 8578, 28 U.S.T. 3459, effective July 15, 1977 (the London Convention). The Congress authorized the President to proclaim the London Convention, repealed earlier legislation dealing with international navigational rules (because the new regulations represent a significant departure from earlier law), and implemented the treaty in the International Navigational Rules Act of 1977, 91 Stat. 308, 33 U.S.C. §§ 1601, *et seq.* Pursuant to Rules 1(a) and 1(b) of the London Convention the United States may no longer enforce its inland waters navigation rules as against ships on the territorial sea. *See* discussion of Regulations, 42 Fed. Reg. 35782, column 2 (1977). The lines the United States has drawn on its official navigation charts to separate waters subject to the new international regulations from waters subject to domestic rules and regulations may not, accordingly, be located seaward of the closing line separating Geneva Convention inland water from the territorial sea. In fact, these lines will err in favor of placing some Geneva Convention inland water under the international navigation regulations because the Coast Guard chose to use "physical objects readily discernible to the mariner by eye, rather than by instrument" as end points of the navigation lines. 42 Fed. Reg. at 35783.

In the second place, the limited purpose for which I am turning to the navigation lines does not violate the dictates of *United States v. Louisiana,* 394 U.S. at 17-35, even as the law existed in 1969. Pursuant to the *Louisiana* opinion, I have first turned to the Geneva Convention and earlier decrees in this case. That treaty and the earlier decrees suggest that I look for the entrance to and the outermost permanent harbor works of the Port. With that in mind I have discussed the physical facilities and layout within the Port of San Pedro, the actual use of those facilities by the United States Navy, and the natural geographic contours of the

California coast to either side of the Port. Based on that discussion I have found that the Anaheim Bay Jetties constitute the outermost permanent harbor works and that the gap between those jetties and the Long Beach Breakwater constitutes an entrance to the Port of San Pedro. The inland water navigation lines simply provide one additional source of evidence shedding light on what constitute the entrance and the outermost permanent harbor works as those terms are used in the Geneva Convention. With that limited purpose in mind I turn to examine the inland water navigation lines.

The lines separating inland waters for navigation purposes from waters on which the London Convention controls are known as "COLREGS Demarcation Lines." These lines were first promulgated in 42 Fed. Reg. 35782, *et seq.* (1977), and are now found in 33 C.F.R., Part 82 (1978). More specifically, 33 C.F.R. § 82.1135(a) establishes a line from the seaward tip of the Anaheim Bay East jetty to the seaward tip of the Anaheim Bay West jetty to the eastern tip of the Long Beach Breakwater. *See 7 United States Coast Pilot,* Plaintiff's Exhibit 17, at 27. This line is plainly marked on National Ocean Survey Chart 18749, Defendant's Exhibit HH. *See also* Note A on that chart. The plaintiff in this action has thus formally recognized that the gap between the Long Beach Breakwater and the Anaheim Bay Jetties constitutes an entrance to the Port of San Pedro, and that the waters landward of a line drawn across that gap are not part of the territorial sea.

Because the United States argues so strenuously that the COLREGS lines should not be considered, I want to stress that I have reached my findings as to the Port of San Pedro without regard to those lines. I have considered the COLREGS lines only as supplemental evidence which supports my findings.

The above discussions and resolution leave one last problem for consideration. California would draw the closing line to the Anaheim Bay East Jetty. The COLREGS Demarcation Line is drawn to the Anaheim Bay West Jetty, and then across the channel to the East Jetty. As previously indicated, Anaheim Bay is itself a part of the harbor system. In order to include the Bay within the inland waters the closing line must be drawn to the East

Jetty. The East Jetty is seaward of the West Jetty, and is thus "outermost." A navigation light is mounted at the seaward end of the East Jetty. Additionally, the straight line requirement would be violated by drawing a line to the West Jetty and then turning to meet the East Jetty. Accordingly, I find that the entrance to the Port of San Pedro is the gap between the Long Beach Breakwater and the Anaheim Bay East Jetty, and that the East Jetty constitutes the outermost permanent harbor work within the meaning of paragraph 4 of the 1966 decree, 382 U.S. at 450-51.

Pursuant to the foregoing I recommend that the closing line delineating the seaward limit of the inland waters of the Port of San Pedro be drawn from the mean lower low water line at the southeastern corner of the Long Beach Breakwater to the mean lower low water line of the seaward, southern-most tip of the Anaheim Bay East Jetty.

IV SAN DIEGO BAY

The Court's 1977 decree established that the mean lower low water line along the eastern, seaward edge of the Zuniga Jetty,[10] to and including the southern, seaward tip of the Jetty, is part of the California coast line. 432 U.S. 40, 42. The Court did not, however, establish the closing line westward from the Jetty across the mouth of San Diego Bay. California would draw the line from the southern, seaward tip of the Jetty to the seaward-most tip of Point Loma. *See* National Ocean Survey Charts 18772 and 18773, Plaintiff's Exhibit 20 and Defendant's Exhibit LL, respectively. *See also* Appendix Figure 2. The United States would draw the line farther north, or inland of the line proposed by California.

As with the Port of San Pedro, both sides agree that, whichever

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[10] A jetty is a structure which fixes the location and protects the mouth of a navigation entrance, such as a river mouth or harbor entrance. Jetties are ordinarily designed to dissipate wave energy and thus provide acceptable currents for the vessels which must navigate the channel. *See* testimony of William J. Herron, transcript of the Denver hearing at 254. *See also* Plaintiff's Exhibit 15.

line is used, San Diego Bay is a juridical bay and the twenty-four mile closing line test is satisfied. Similarly, there is no dispute that San Diego Bay is both a port and a harbor. *See* note 7, *supra*. Consequently, the only question for resolution is the correct location of the line delineating the seaward limit of the Bay's inland waters. 382 U.S. 448, 449. Again, as with the Port of San Pedro, there are a number of ways of phrasing the question. Under paragraph 4(b) of the 1966 decree the issue is what constitutes the port's "outermost permanent harbor works." 382 U.S. at 450. *See* note 7, *supra*. Paragraph 4(d) of the 1966 decree puts the issue in terms of where the bay's "entrance" lies. 382 U.S. at 450-51. Under paragraph 5 of the 1966 decree the question is what constitutes the "outermost extension" of the bay's "headlands." 382 U.S. at 451.

Before proceeding to analyze the issue I think it may be helpful to explain the United States' position in greater detail. The federal government concedes that the seaward edges of Point Loma and the Zuniga Jetty are both points on the California coast line. Using the arc system for delineating the territorial sea, *see* note 4, *supra*, and ignoring any potential closing line between Point Loma and the Juniga Jetty for the moment, the territorial sea edge and the California-United States boundary would appear as depicted by the solid line in Illustration 1. If the line proposed by

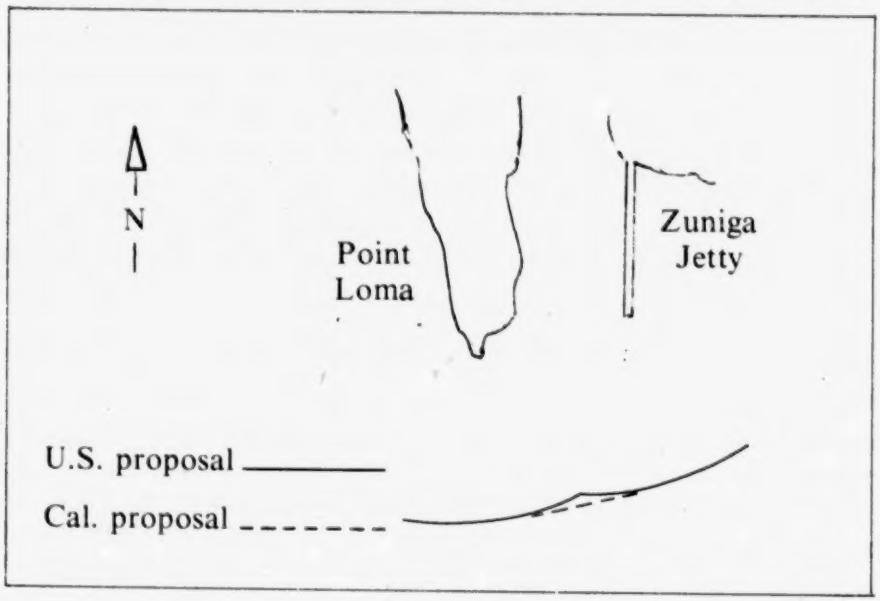

Illustration 1

California were constructed as the closing line of San Diego Bay, then the federal-state boundary will be pushed seaward to the dotted line depicted in Illustration 1. The United States contends that the San Diego Bay closing line should be drawn far enough to the north so as to avoid disturbing the solid boundary line created by the intersecting arcs. *See* Motion, Proposed Decree and Memorandum on Behalf of the United States, at 5 n. 3.

On closer examination I find that the United States' argument assumes the answer to the very question posed. The federal government can only achieve the three mile line it desires by assuming the closing line of San Diego Bay is as the United States contends it should be. Once the federal-state boundary is established in this manner, the United States complains that placing the closing line of San Diego Bay in the position advanced by California disturbs the three mile line already drawn. This approaches the issue entirely backwards. The first question to be decided is where the coast line — that is, the closing line of San Diego Bay — is located. The three mile test is applied to delineate the federal-state boundary line after, and only after, the coast line has been located. I shall proceed on that basis.

I find that the peninsula of land known as Point Loma constitutes the western outermost extension of San Diego Bay's headlands within the meaning of paragraph 5 of the 1966 decree, 382 U.S. at 451. This is a natural land formation which provides shelter for the channel leading into San Diego Bay proper, immediately to the east. Because of its height the peninsula is highly visible to approaching vessels. A seventy foot tower at the southern end of the Point was constructed for navigation purposes, and contains a light, radio beam, fog signal, and radio calibration station. Other highly visible structures atop the peninsula are navigation landmarks for ships entering the bay. *See 7 United States Coast Pilot*, Plaintiff's Exhibit 17, at 118. The National Ocean Survey Charts depict a navigation channel into San Diego Bay immediately to the east of the peninsula. National Ocean Survey Charts 18772 and 18773, Plaintiff's Exhibit 20 and Defendant's Exhibit LL. The mean lower low water line at the southern, seaward edge of Point Loma should, accordingly, be used as the western endpoint of the closing line. The real dispute involves the eastern endpoint of the line somewhere along Zuniga

Jetty or at Zuniga Point, where the Jetty connects with the land.

Dr. Robert D. Hodgson, Geographer of the Department of State, was primarily responsible for explaining the United States' position during the Denver hearings, and for drawing the National Ocean Survey Charts referred to in this report. According to his testimony the federal government's position hinges, in large part, on the accuracy of National Ocean Survey Charts 18772 and 18773, Plaintiff's Exhibit 20 and Defendant's Exhibit LL. Those charts depict the Zuniga Jetty as a submerged structure.[11] Commencing on the land at Zuniga Point and proceeding seaward along the Jetty, Dr. Hodgson agrees that the Jetty constitutes a permanent harbor work up to the point where the structure is first submerged. Dr. Hodgson, who had not seen the structure first hand, would use this point of submersion as the outermost permanent harbor work and the eastern endpoint of the entrance to San Diego Bay. *See* Transcript of the Denver hearing at 160-63. Dr. Hodgson was very forthright in his testimony as to two particular matters. First, if the Zuniga Jetty were not submerged, or even only twenty-five percent submerged, he would concede that California's position is correct. The more continuous the Jetty, the stronger California's position becomes. Second, the Geographer testified that if the National Ocean Survey Charts are incorrect, then the actual physical situation should prevail.

Taking the testimony of Dr. Hodgson as representing the position of the United States, it is evident that there is a good deal of agreement between the two parties. Up to the point where the Jetty may become submerged, or where the portion of the structure which is above water becomes discontinuous, there is no dispute that the structure constitutes a permanent harbor work[12] which protects the entrance to San Diego Bay. This follows not only from the Jetty's structural function of providing a safe, relatively wave-free channel leading into the harbor area, but also from the presence of five navigation lights or beacons and a navigation horn on the Jetty. The closing line for San Diego Bay

[11] Submerged means entirely below mean lower low water. *See* testimony of Dr. Robert D. Hodgson, transcript of the Denver hearing at 158-59.

[12] There is no question that a jetty can be a permanent harbor work. *United States v. Louisiana,* 394 U.S. 11 at 50 n. 64.

may be drawn, at the very least, from the point of submersion or aerial discontinuity to Point Loma.

California argues that the navigation charts are incorrect and that the Jetty is in fact a continuous above-water structure to its seaward-most point opposite Point Loma. The Jetty is one of the earliest navigational structures built along the southern California coast. Completed in 1903, its original Congressionally approved design height was twelve feet above the water line. The current height does not approach twelve feet along most of the structure. In 1963 or 1964 the Army Corps of Engineers recommended restoring the Jetty to this original design height. Although this was not done, five mounds of rock were added to support five navigation lights which are depicted on the National Ocean Survey Charts.

Defendant's Exhibit II, Picture 2, is a series of photographs pasted together to depict the entire length of the Zuniga Jetty. The photographs were taken from Point Loma last January at a time when the tide was one foot above mean lower low water. *See* Defendant's Exhibit JJ. There appear to be two spots where the Jetty's apex does not rise above this higher than low water level. Both spots are "blown-up" beneath Picture 2. The smaller of the two enlarged photographs, depicting the area between lights 3 and 4,[13] shows waves breaking over the apex of the Jetty. Similarly, there also appear to be waves breaking over the apex of the jetty in the area between lights 4 and 5. The Army Corps of Engineers constructed a profile or elevation diagram of the Jetty, which is mounted on the upper right hand corner of Exhibit II. This profile corresponds with both Picture 2 on the exhibit and my own memory of the Jetty from our inspection trip last fall. From this profile I find that the area between lights 3 and 4 is not submerged at mean lower low water, although the crown of the Jetty does dip very close to mean lower low water just seaward of light three. Most, but not all of the Jetty is very slightly submerged between lights 4 and 5.

The United States contends that the submerged portion of the Jetty is navigable. I find this is not so, regardless of the definition

[13] The five lights are numbered from one to five beginning with the light closest to shore. *See* the Army Corps of Engineers Zuniga Jetty Profile, mounted at the upper right hand corner of Defendant's Exhibit II.

of navigable waters which one chooses to adopt. The evidence is unrefuted that there have been numerous small boating accidents, including two fatalities, resulting from attempts to navigate over the so-called submerged jetty.

I find that the Jetty is not submerged at any point landward of light 4, and that the jetty is only partially and very slightly submerged between lights 4 and 5. The rock base at light 5 on the southern end of the Jetty is not submerged, and the apex of the Jetty for ten to twenty yards shoreward of light 5 is also not submerged. The portion of the Jetty which is slightly submerged constitutes less than one-fifth of the Jetty's entire length; even though submerged, this portion of the Jetty is not navigable. National Ocean Survey Charts 18772 and 18773, Plaintiff's Exhibit 20 and Defendant's Exhibit LL, are incorrect. I find that the unsubmerged portion of the Jetty is continuous from the land seaward through light 4. I find that the entire length of the Jetty constitutes a harbor work and that the seaward tip of the Jetty constitutes the outermost permanent harbor work within the meaning of paragraph 4(b) of the 1966 decree, 382 U.S. at 450. The line from the seaward tip of this Jetty to the seaward tip of Point Loma is the entrance to San Diego Bay within the meaning of paragraph 4(d) of the 1966 decree, 382 U.S. at 450-51.

As with the Port of San Pedro, my conclusions as to San Diego Bay are supported by the federal government's COLREGS Demarcation Line system. *See* Part III of this report, *supra* at 10-12. The Demarcation Line separating inland waters from international waters for navigation purposes is drawn from the southern part of Point Loma to the seaward most light on the Zuniga Jetty.[14] *See* 33 C.F.R. § 82.1110 (1978) and *7 United States Coast Pilot*, Plaintiff's Exhibit 17, at 118. *See also* National

[14] The western end of this line is actually at the navigation tower slightly landward of the mean lower low water line. *See* National Ocean Survey Charts 18772 and 18773, Plaintiff's Exhibit 20 and Defendant's Exhibit LL. As previously indicated, this is because the Coast Guard used physical objects visible to the eye without resort to instrumentation, such as the navigation tower, as endpoints of the COLREGS lines. 42 Fed. Reg. at 35783. That physical location problem does not exist for those locating the federal-state boundary, and both the statutes and the law of the case mandate using the mean lower low water line as the reference point for the closing line. *See* paragraph 2(a) of the 1966 decree, 382 U.S. at 449.

Ocean Survey Charts 18772 and 18773, Plaintiff's Exhibit 20 and Defendant's Exhibit LL. I again stress that I cite the COLREGS lines only as supplemental evidence supporting my conclusions concerning the Zuninga Jetty. *See* pp. 10-12, *supra.*

Finally, I think my findings are supported by the 1977 supplemental decree in this lawsuit, 432 U.S. 40, 42. In that decree the Court specifically established the mean lower low water line at the southern, seaward end of the Jetty as a point on the California coast line. I fail to see the logic underlying the United States' position, which would run the coast line along the eastern edge of the Jetty to the seaward tip, turn around, and then run the coast line back along the Jetty towards the shore.

Pursuant to the foregoing I recommend that the closing line delineating the seaward limit of the inland waters of San Diego Bay be drawn from the mean lower low water line on the southern, seaward-most tip of the Zuniga Jetty, seaward of light 5, to the mean lower low water line on the southern, seaward-most end of Point Loma.

V THE PIERS AND RINCON ISLAND

A. *The Problem*

The third issue presented for my consideration has a different flavor than the problem of the Port and Bay closing lines already discussed. The question presented by the fifteen piers and Rincon Island, *see* Appendix, Figures 3-18, is whether the California coast line follows the mean lower low water line along the natural shore, or whether the coast line follows fifteen manmade piers and the Rincon Island complex protruding into the sea from the natural shore.[15] I shall proceed in this part of my report by setting out a factual description of the piers and island in subpart B, *infra,* and then turning to a discussion of the structures in light of

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[15] Under the Geneva Convention a synonymous way of phrasing the issue is whether or not the seaward edges of the structures in question should be used as basepoints for delimiting the territorial sea.

the controlling legal principles in subpart C, *infra*.

B. *Description of the Structures*

The following descriptions are based on my visual observations during the November inspection tour and evidence offered at the Denver hearing. *See also* Defendant's Exhibit I, a blue looseleaf binder containing photographs and schematic diagrams of the various sites described.

1. *Rincon Island and the Punta Gorda "Causeway," (Appendix Figure 9).* Rincon Island is an artificial island off the shore near Punta Gorda, Ventura County. *See* National Ocean Survey Chart 18720, Defendant's Exhibit CC. The island is built up from the ocean floor with large concrete tetrapods.[16] The surface of the island is rock and dirt fill. The island complex is privately owned, by the Atlantic Richfield Company, and access is restricted. There are many buildings and other structures on the island, all related to an active oil well maintained by the owner. These buildings include maintenance facilities, office space, and temporary housing for employees. There is vegetation growing on the island. There is a large dock on the seaward side of the island with substantial hardware, including cleats, wenches, and cranes, for the berthing of vessels. The dock is used to service other, offshore, oil facilities owned or operated by Atlantic Richfield.

Rincon Island is permanently connected to the mainland by a structure commonly known and identified on road maps as the Punta Gorda "Causeway." Oil is pumped to shore in a pipeline running underneath and alongside the structure. The "causeway" itself is made of a wooden deck and rail resting on a steel frame and pilings. The pilings are filled with gravel and capped with concrete. Water flows freely underneath the deck, but any attempts at subnavigation would be extremely hazardous. Traffic lights at each end of the half-mile facility control the flow of traffic onto and off of the island. The structure, the island, and the dock are regularly used by Atlantic Richfield employees. Neither the structure nor the island have had any noticeable effect on the shore line, and the complex is not a coast protective work.

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[16] These blocks resemble giant-sized versions of the child's "jacks." *See* testimony of William J. Herron, transcript of the Denver hearing at 278.

A controversey developed at the Denver hearing over the question concerning whether the structure connecting the island with the mainland is a "pier" or a "causeway." My recommendation will be based on factors other than a resolution of that factual dispute; I will not, accordingly, resolve the issue.

2. *The Fifteen Piers (Appendix, Figures 3-8, 10-18*[17].) The fifteen piers have an asphalt, wood, or concrete deck surface mounted on pre-cast concrete, steel, or wood pilings. They vary in length from 500 (Santa Barbara Biltmore Hotel) to 3,500 (Ocean Beach) feet. All are permanently attached to the mainland. Water flows freely underneath all of the piers, but any attempt at subnavigation would be extremely hazardous. The piers have no visible effect on the shore line and they are not coast protective works.

Carpenteria, Ellwood, Morro Strand, and the Santa Barbara Biltmore Hotel Piers are privately owned. The Biltmore Hotel Pier is owned by the hotel and access to the general public is forbidden. Carpenteria, Ellwood, and Morro Strand are owned by oil companies and access to the general public is also forbidden. These three oil company piers are currently used by their owners for access to vessels which are used to supply offshore oil rigs.

The remaining eleven piers are publicly owned. The Port Orford Pier, built by Santa Barbara County and operated by the California State Department of Parks and Recreation, is used both as a port facility and for general recreational purposes. The remaining publicly owned piers are not used as port facilities, but they are open to free public access for recreational purposes. Most of these piers are lighted and many contain public restrooms, fish and tackle shops, small snack bars or restaurants, and other concession stands. The Venice Pier has a lifeguard stand.

C. *Discussion*

1. *Outline of the Governing Law.* Once again, the question is

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[17] The original moving papers sought a recommendation as to the El Segundo Pier. That pier has since been removed from the coast and is no longer at issue. *See* note 2, *supra.*

where the coast line is located in the vicinity of these fifteen piers and the Rincon Island complex. The term coast line is defined in § 2(c) of the Act, 43 U.S.C. § 1301(c):

> The term "coast line" means the line of [mean lower] low water along that portion of the coast which is in direct contact with the open sea and the line marking the seaward limit of inland waters.

See also paragraph 2(a) of the 1966 decree, 382 U.S. 448, 449. The definition does not, however, address the problem at hand. The statute does not define the term "coast" and there is no indication in the Act as to whether the term was intended to encompass only the natural shore or the natural shore as modified by manmade structures protruding into the open sea.

Two paragraphs in the 1965 opinion in this case, dealing with artificial extensions of the land, may provide some guidance:

> When this case was before the Special Master [Mr. Davis], the United States contended that it owned all mineral rights to lands outside inland waters which were submerged at the date California entered the Union, even though since enclosed or reclaimed by means of artificial structures. The Special Master ruled that lands so enclosed or filled belonged to California because such artificial changes were clearly recognized by international law to change the coastline. Furthermore, the Special Master recognized that the United States, through its control over navigable waters, had power to protect its interests from encroachment by unwarranted artificial structures, and the effect of any future changes could thus be the subject of agreement between the parties.
>
> Arguments based on the inequity to the United States by allowing California to effect changes in the boundary between federal and state submerged lands by making future artificial changes in the coastline are met, as the Special Master pointed out, by the ability of the United States to protect itself through its power over navigable waters.

381 U.S. at 176-77. This text was incorporated into paragraph 2 of the 1966 decree, 382 U.S. at 449:

> The coast line is to be taken as heretofore or hereafter modified by natural or artificial means, and includes the outermost permanent harbor works that form an integral part of the harbor system within the meaning of Article 8 of the [Geneva Convention].

Turning to the Geneva Convention,[18] *United States v. California,* 381 U.S. 139, 165 (1965), and *United States v. Louisiana,* 394 U.S. 11, 16, 34 (1969), the parties have rested their arguments on two provisions, Articles 3 and 8. Article 8 is paraphrased in the second clause of paragraph 2 of the 1966 decree, just quoted:

> The outermost permanent harbour works which form an integral part of the harbor system shall be regarded as forming a part of the coast.

Article 3 provides that

> The normal baseline for measuring the breadth of the territorial sea is the low water line along the coast as marked on large-scale charts officially recognized by the coastal state.

Perhaps Mr. Lauterpacht, *see* note 18, *supra,* summarized the state of the law, domestic as well as international, best when he said:

> Nothing is inserted in the Convention on the Territorial Sea ....In short, the basic approach of the treaties has been to regulate the problems which arise from the presence of natural features off the coast or from the need to separate

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[18] At the New York City hearing I had the privilege of listening to two of the world's foremost international legal scholars discuss the history of the law of the sea leading up to and following the Geneva Convention. The Hon. Philip C. Jessup, formerly a Judge of the International Court of Justice at the Hague and a distinguished professor and practitioner of international law, testified for the State of California. Mr. Elihu Lauterpacht, Queen's Counsel, also a distinguished professor and practitioner of international law, testified for the United States of America. Although neither witness was able to reach a clear-cut, definitive conclusion, I have found the work of both to be most helpful in providing me with a background and framework in which to work. When citing to the testimony of one in this report I intend no disrespect to the other.

> internal from territorial waters. The effect of man-made structures has not been the subject of special provision in the codifying treaties, and only rarely of specific discussions by the authors. It is evident, therefore, that in the present case we are dealing with a highly exceptional problem....

Plaintiff's Exhibit 12, at 17.

2. *The Discontinuous Low Water Line.* If one were to take a giant carving knife and make a horizontal slice just above the line of mean lower low water, the resulting aerial view of a pier would appear as a series of parallel circles protruding into the sea. This series of small circles, which represent the pilings supporting the pier deck, create what the United States labels a discontinuous low water line. The United States contends that this lack of a continuous low water line precludes any use of the piers as part of the coast line. California, however, points out that jetties, breakwaters, and even sand beaches do not have a continuous low water line, either,[19] yet the Supreme Court has decreed such structures to be a part of the coastline.

I find that the discontinuous nature of the low water line does not affect whether or not the structure is to be considered a part of the coast. If the structure is part of the coast, then the perimeter of the structure, as delineated by a series of lines drawn tangent to, and connecting, the outer edges of the pilings, constitutes the coast line. The discontinuous nature of the structure goes only to the effect the structure will have on accretions, relictions, wave energy, littoral sand movement, and the like. An open pile structure such as a pier, which is 90 to 98 percent void, will ideally have no effect on wave energy or accretion, whereas a more solid structure such as the Long Beach Breakwater, 40 to 45 percent void, will dissipate wave energy. The continuity or discontinuity of the water line is an engineering characteristic which affects only whether or not the structure is a coast protective work.

3. *Discussion — Article 3.* As previously indicated, Article 3 of

[19] In the case of a breakwater, for example, the structure's function of dissipating wave energy cannot be accomplished unless a large portion of the volume is void. Thus, although the rock structure retains the outward appearance of solidity, that appearance is deceiving. *See* testimony of William J. Herron and Dr. Richard J. Weggel, transcript of the Denver hearing at 270 and 402.

the Geneva Convention provides that "the normal baseline for measuring the breadth of the territorial sea is the low water line along the coast as marked on large-scale charts officially recognized by the coastal state." During the Denver hearing it became apparent that the territorial sea, as depicted by the United States on its National Ocean Survey Charts, appears to have been drawn by using at least some of the piers now in question as basepoints for swinging the three mile arc. *See* Transcript of the Denver Hearing at 209-10. California contends that, pursuant to Article 3, the United States is bound by these charts and may not now argue against using the piers for measuring the territorial sea.

Upon closer examination, however, I find that the charts in question are simply erroneous and do not represent the position of the United States government. In many places the depicted territorial sea bears no relationship to the natural coast line whatsoever, let alone to artificial structures erected along the coast. Some of the errors inhere in the impreciseness of the multi-colored printing processes used to publish the charts, some are due to changes in climate between the place where the charts were printed and the locale where the measurements were made, and some are simply the result of poor drafting. *See* Transcript of the Denver Hearing at 381-90. Note X on all National Ocean Survey charts contains a disclaimer covering just such a problem. I find that the charts are not susceptible of accurate use for purposes of Article 3, and that the piers do not, therefore, constitute a part of the coast line within the meaning of Article 3.

4. *Discussion—Article 8 and Artificial Structures.* The portion of the Supreme Court's 1965 opinion in this case dealing with artificial structures, quoted *supra* at 22, must be my starting point as that opinion is the law of this case. Although the quoted paragraphs underlie the heading "Artificial Accretions," the language in the passage refers more generally to "artificial structures." 381 U.S. at 176-77. The Supreme Court adopted the recommendation of Special Master Davis concerning these "artificial structures" so I have referred to his 1952 report in order to ascertain precisely what was intended by the Court's 1965 language. I find that Special Master Davis was discussing not just accretions, but also artificial structures built in or on the navigable sea. 1952 Report of the Special Master at 44-45.

Accordingly, there is no doubt that artificial structures erected along the California shore can modify the natural coast line. *See, e.g.*, the 1977 decree in the instant case, 432 U.S. 40, where several artificial structures are used as modifications of the natural coast line. As has been noted by the Court, this does not give California a mandate to push its boundary seaward by building more and more structures, because the United States retains the ability to control any construction over navigable waters and to condition such construction on an agreement not to alter the Submerged Lands Act boundary. Indeed, it is clear that the Army Corps of Engineers is now required to consider a proposed structure's effect on the Submerged Lands Act boundaries, and if any effect is indicated the Attorney General and Solicitor of the Department of Interior must be consulted before any permit may issue. 42 Fed. Reg. 37137 (1977), now codified in 33 C.F.R. § 320.4(f) (1978).

There is, however, a curious circularity involved. Paraphrasing the 1966 decree, the coast line is to be taken as modified by artificial means. 382 U.S. at 449. Although this sentence indicates that artificial structures can modify the coast line, it does not indicate that all artificial structures necessarily do modify the coast line. All that can definitely be concluded is that if a particular artificial structure does modify the coast line, then that modified coast line shall be used in determining the federal-state boundary. Some artificial structures may, consequently, modify the coast line, but others may not. There must be a balancing of the competing considerations involved, and I now turn to that process. In balancing the considerations I shall be guided by the practical approach of commentators McDougal and Burke, *The Public Order of the Oceans* at 387-88 (1962):

> When the construction of an area of land serves consequential coastal purposes, it would seem to be in the common interest to permit the object to be used for delimitation purposes....The principal policy issue in determining whether any effect for delimitation purposes ought to be attributed to other formations and structures is whether they create in the coastal state any particular interest in the surrounding waters that would otherwise not exist,

> requiring that the total area of the territorial sea be increased....

California bases its position largely on Article 8 of the Geneva Convention, which indicates that the outermost permanent harbor works forming an integral part of a harbor system shall be regarded as forming a part of the coast. The state points more specifically to paragraph 2 of the International Law Commission's (ILC) commentary[20] to what became Article 8 of the Geneva Convention: "Permanent structures erected on the coast and jutting out to sea (such as jetties and coast protective works) are assimilated to harbor works." UN GA OR 11th Session Supplement No. 9 (A/3159), at 16. *See* Defendant's Exhibit C at 50, *et seq.*, and the transcript of the New York City hearing at 64-80. The key word in California's argument is jetty. ILC proceedings were conducted in both French and English, and the French *jeteé* can be translated as both jetty and pier. *See, e.g.*, transcript of the New York City hearing at 54, 142-43, and 260-62. Although there does appear to be a translation ambiguity,[21] I can assume that the word "jetties" as used in paragraph 2 of the ILC commentary does indeed mean "piers" without affecting the conclusions I reach in this report. I shall, accordingly, make that assumption.

The United States argues that the key words in Article 8 are "harbor works" forming an integral part of a "harbor system." It is in this context that the commentary refers to jetties and coast protective works. Accepting, *arguendo*, California's position that the term "jetties" in the commentary includes the concept of "piers," the federal government concludes that a pier must

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[20] The United Nations' International Law Commission worked on the law of the sea during the period from 1952 to 1956. These ILC meetings developed what was ultimately adopted as Article 8 of the Geneva Convention.

[21] The United States argues, *inter alia*, that none of the structures involved are "permanent," and the translation ambiguity need not be reached. I do not wish to become involved in a philosophical discussion of the concept of permanence — earthquakes occurring in California during the Denver hearings lead one to the conclusion that nothing is permanent — but, from a practical point of view, permanence is a function of design, purpose, and maintenance. Transcript of the Denver hearing at 257-58. I find that all of the structures involved are permanent.

nevertheless be part of a harbor system before it comes within the ambit of Article 8 and paragraph 2. None of the piers in question is part of a harbor or harbor system as those terms are defined in note 7, *supra*, because none of the piers provides an anchorage sheltered from weather conditions on the open sea. Article 8 and paragraph 2, the United States concludes, cannot apply.

California, on the other hand, cites to the final paragraph of footnote 64 in *United States v. Louisiana*, 394 U.S. 11, 49-50 (1969), for the proposition that a structure need not be connected with a harbor in order to be treated as forming a part of the coast. In the *Louisiana* case the federal government advanced the same position with respect to certain beach erosion jetties in the Gulf of Mexico as it now advances with respect to the piers. The Court, in footnote 64, appears to have rejected the United States' position. I nevertheless find that California attempts to read too much into the somewhat unclear language of the footnote. In that same footnote the Court held that the jetties in question were, in fact, harbor works connected with a true harbor. The Court thus did not need to reach the question of whether the jetties should be "assimilated" to harbor works. The footnote, moreover, was concerned solely with beach erosion jetties which were undisputedly coast protective works. The instant case poses the problem of piers which I have found are not coast protective works. The language of footnote 64, consequently, does not necessarily apply to the piers now under consideration.

In their efforts to apply Article 8 and earlier Supreme Court decrees to the instant problem, both Judge Jessup and Mr. Lauterpacht, *see* note 18, *supra*, have discussed the source materials exhaustively. When all is said and done it seems clear that the drafters of the Geneva Convention and the commentators simply did not think of or consider the question of artificial piers erected on the open coast and not directly connected with any conventional harbor. *See* Plaintiff's Exhibit 12 and Defendant's Exhibits C and C-1. After carefully reviewing the evidence before me in light of the testimony of both expert witnesses, I come back to the reasonableness test of Mc Dougal and Burke, *supra* at 26. I find that neither the piers nor the Rincon Island complex create an "interest in the surrounding waters that would not otherwise exist." Harbor works connected with a

conventional harbor, for example, create an interest in maintaining the navigational integrity and safety of the surrounding waters, and this interest justifies treating the artificial structures as modifications of the natural coast. Similarly, the artificial structures not connected with a harbor but which have been decreed a part of the coast serve specific functions relating to maintaining the natural shore line against the forces of erosion, creating navigable channels for ocean-going vessels, or otherwise aiding in coastal maintenance and improvement. In that context they, too, create an interest in the surrounding waters justifying use of the structures as basepoints for measuring the Submerged Lands Act boundaries. The piers in question provide no such coastal maintenance function and the volume of shipping handled by the three oil company piers, *see* subpart B, *supra*, does not justify assimilating those piers to harborworks within the meaning of Article 8.

I also note that Rincon Island could not qualify as an "island" for purposes of delimiting the territorial sea under the Geneva Convention because it is an artificial island. *See* Article 10 and transcript of the New York City hearing at 107-09. I do not think the fact that the island is connected to the mainland by a pier should have any effect on the result otherwise dictated by Article 10.

Pursuant to the foregoing I recommend that an order issue decreeing that the Rincon Island complex and the fifteen piers in question do not constitute artificial modifications of the coast, and that the California coast line follows the natural coast in the vicinity of these structures for purposes of fixing the federal-state boundary under the Submerged Lands Act.

VI CONCLUSION

I recommend that the Supreme Court adopt the decree proposed by the State of California as to the Port of San Pedro and San Diego (Paragraphs 1 and 2 of California's Proposed Fourth Supplemental Decree). I further recommend that the Supreme Court decree that neither the Rincon Island complex nor any of the fifteen piers constitute artificial modifications of the coast, and that the California coast line follows the natural coast in the vicinity of these structures for purposes of fixing the federal-state boundary under the Submerged Lands Act.

Denver, Colorado
August 20, 1979

Respectfully submitted,

Alfred A. Arraj
Special Master
C540 U.S. Courthouse
Denver, Colorado 80294

APPENDIX

The diagrams which follow are adapted from those found in California's Petition for Entry of a Fourth Supplemental Decree. The diagrams are intended solely for the purpose of illustrating the text of this report. They are not necessarily accurate, and they should not be used for taking measurements or for any other purpose requiring accuracy.

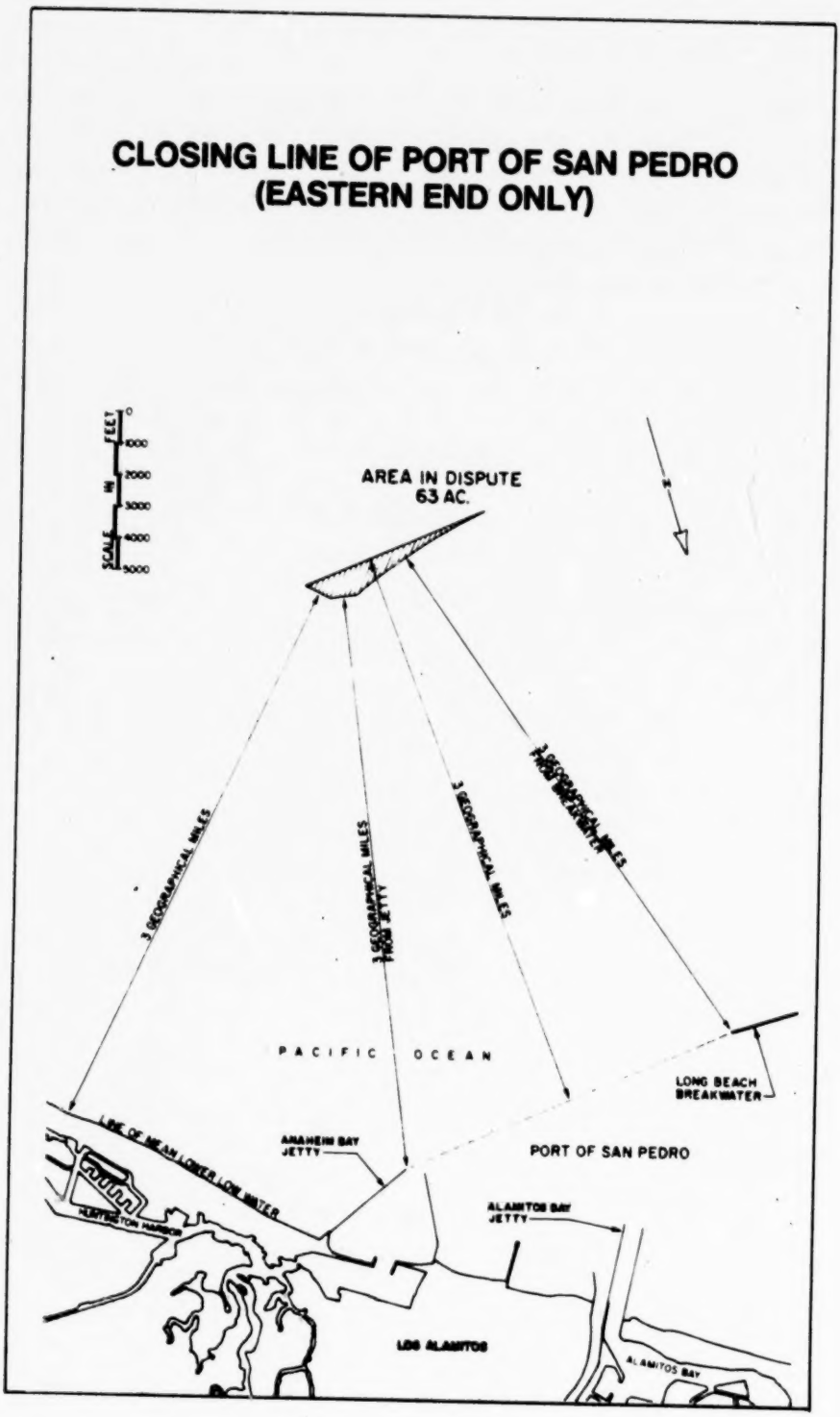
CLOSING LINE OF PORT OF SAN PEDRO
(EASTERN END ONLY)
SCALE IN FEET
0
1000
2000
3000
4000
5000
AREA IN DISPUTE
63 AC.
N
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM JETTY
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM BREAKWATER
PACIFIC OCEAN
LONG BEACH BREAKWATER
ANAHEIM BAY JETTY
PORT OF SAN PEDRO
LINE OF MEAN LOWER LOW WATER
HUNTINGTON HARBOR
ALAMITOS BAY JETTY
LOS ALAMITOS
ALAMITOS BAY

Figure 1

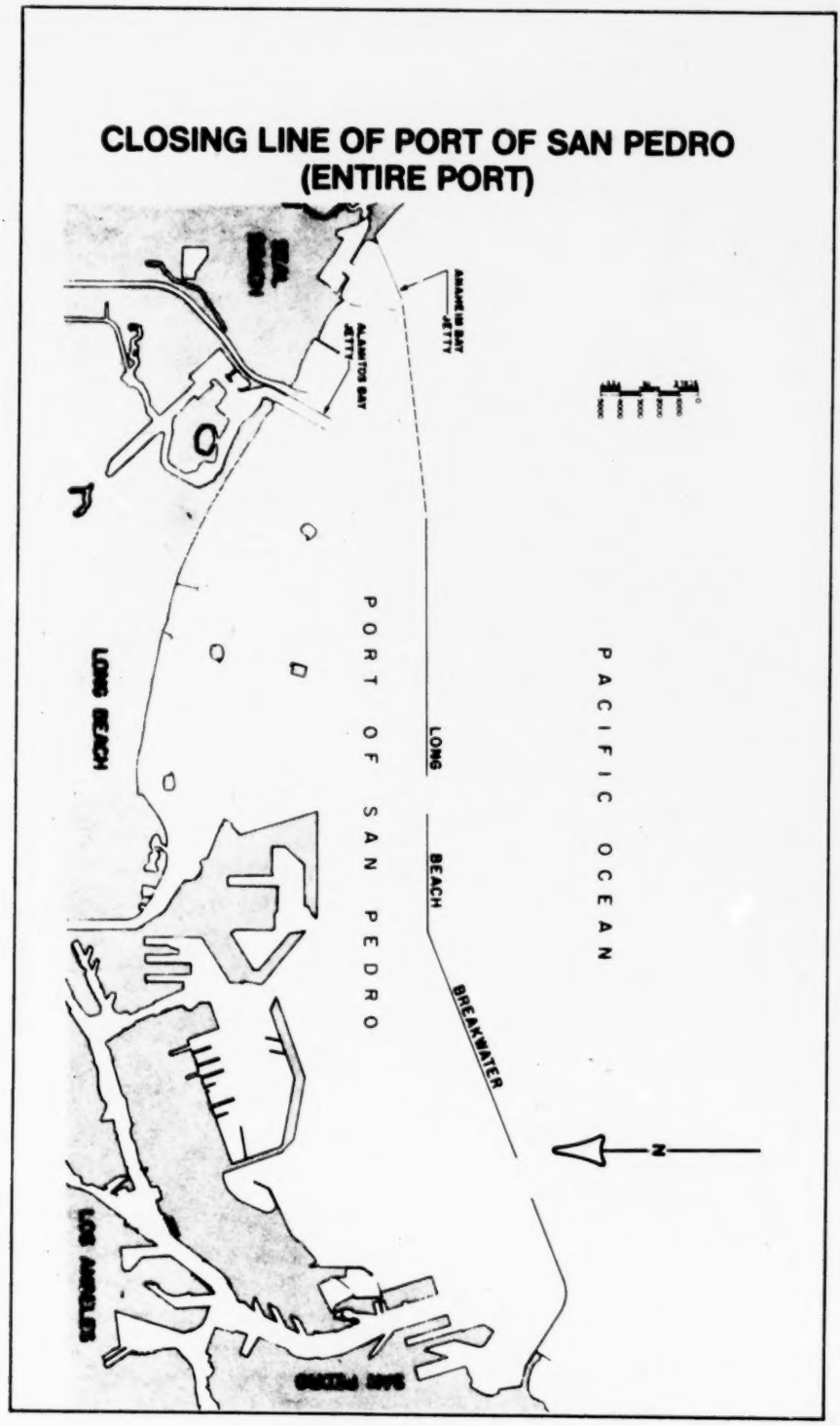
CLOSING LINE OF PORT OF SAN PEDRO
(ENTIRE PORT)
LONG BEACH
PORT OF SAN PEDRO
LONG BEACH BREAKWATER
PACIFIC OCEAN
N

Figure 1a

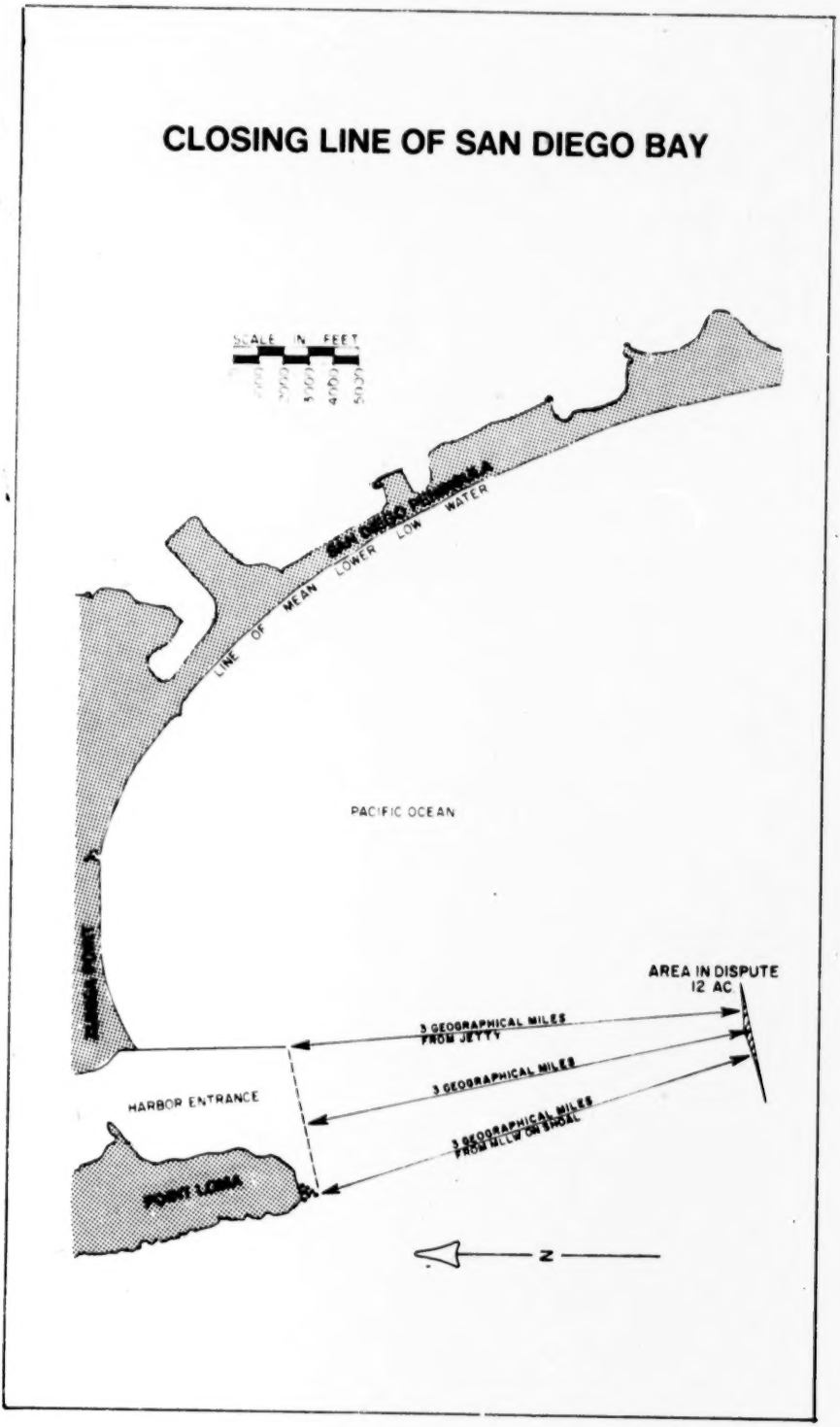
CLOSING LINE OF SAN DIEGO BAY
SCALE IN FEET
SAN DIEGO PENINSULA
LINE OF MEAN LOWER LOW WATER
PACIFIC OCEAN
POINT LOMA
AREA IN DISPUTE
12 AC
3 GEOGRAPHICAL MILES FROM JETTY
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM MLLW ON SHOAL
HARBOR ENTRANCE
POINT LOMA
N

Figure 2

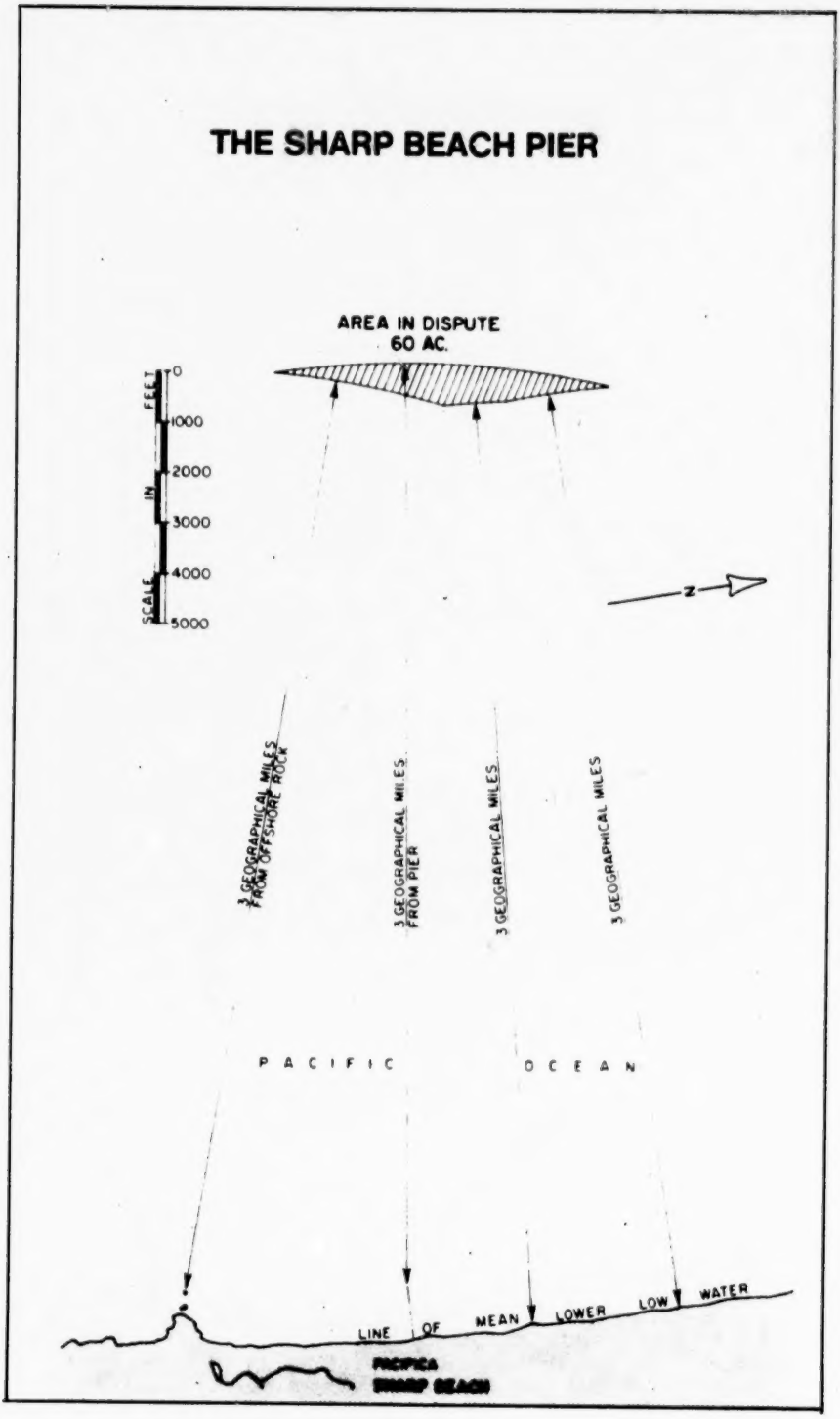
THE SHARP BEACH PIER
AREA IN DISPUTE
60 AC.
SCALE IN FEET
0
1000
2000
3000
4000
5000
N
3 GEOGRAPHICAL MILES FROM OFFSHORE ROCK
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES
PACIFIC OCEAN
LINE OF MEAN LOWER LOW WATER
PACIFICA
SHARP BEACH

Figure 3

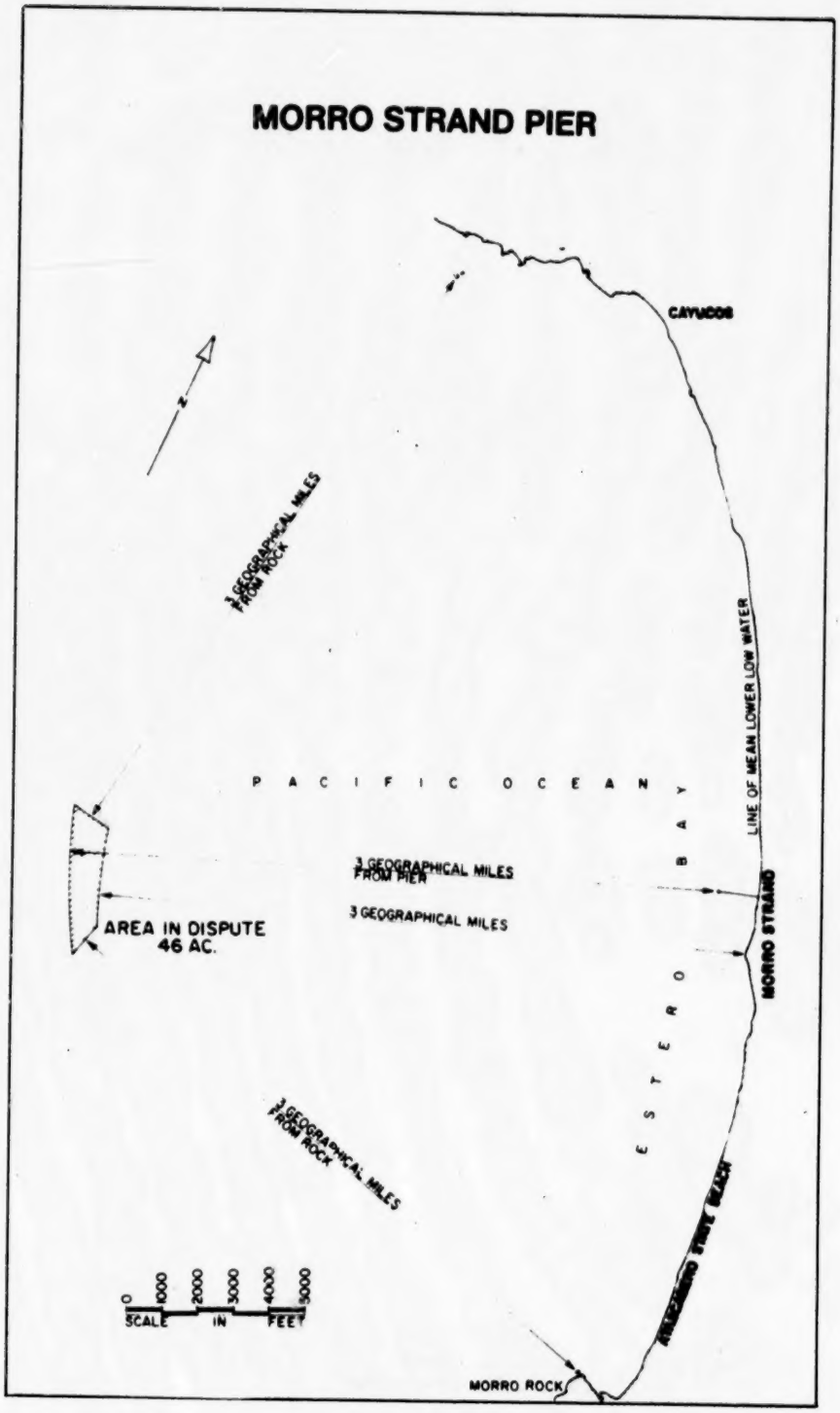
MORRO STRAND PIER
CAYUCOS
3 GEOGRAPHICAL MILES FROM ROCK
LINE OF MEAN LOWER LOW WATER
P A C I F I C O C E A N
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES
AREA IN DISPUTE
46 AC.
E S T E R O B A Y
MORRO STRAND
3 GEOGRAPHICAL MILES FROM ROCK
0 1000 2000 3000 4000 5000
SCALE IN FEET
MORRO ROCK

Figure 4

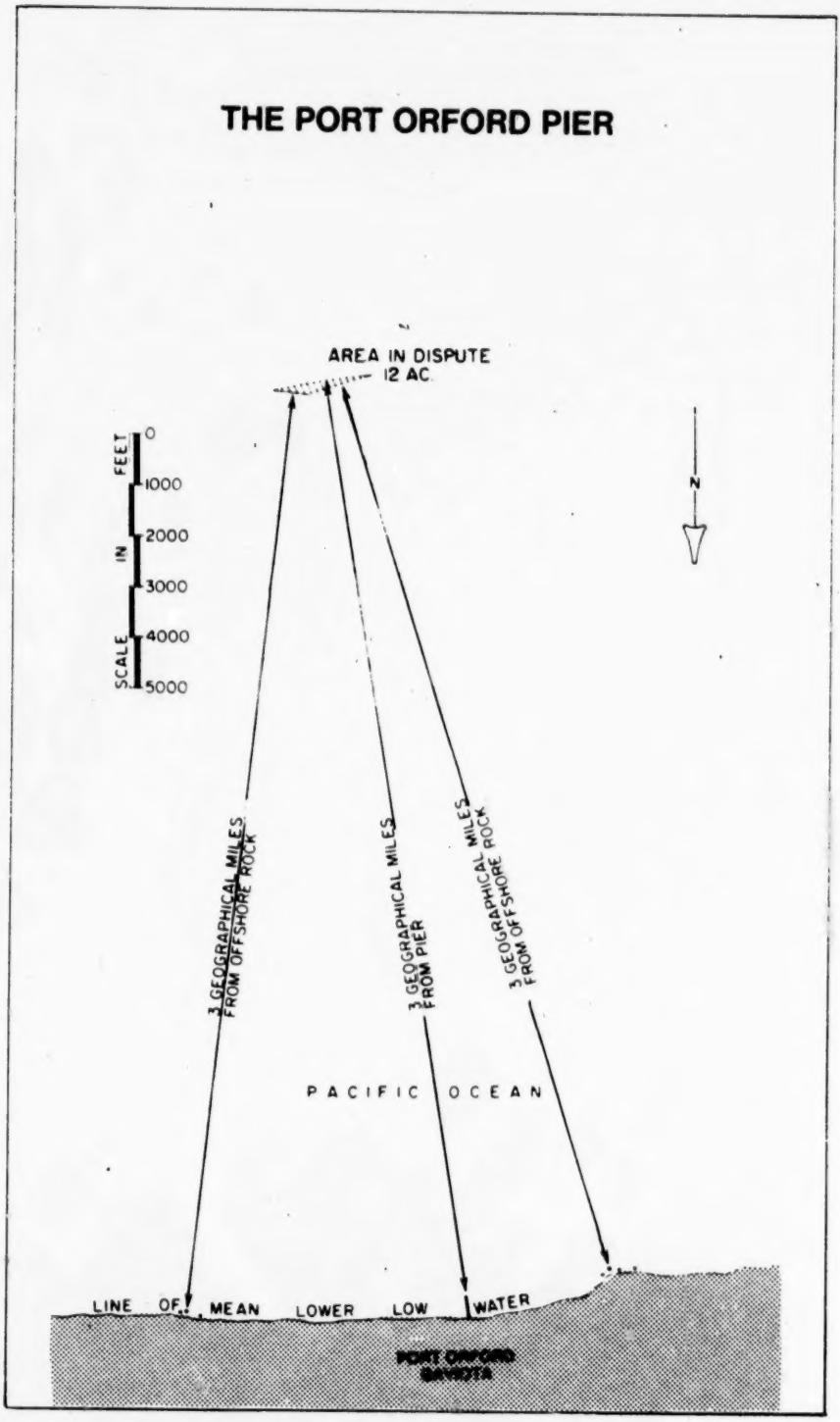
THE PORT ORFORD PIER
AREA IN DISPUTE
12 AC.
SCALE IN FEET
0
1000
2000
3000
4000
5000
N
3 GEOGRAPHICAL MILES FROM OFFSHORE ROCK
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES FROM OFFSHORE ROCK
PACIFIC OCEAN
LINE OF MEAN LOWER LOW WATER
PORT ORFORD
OREGON

Figure 5

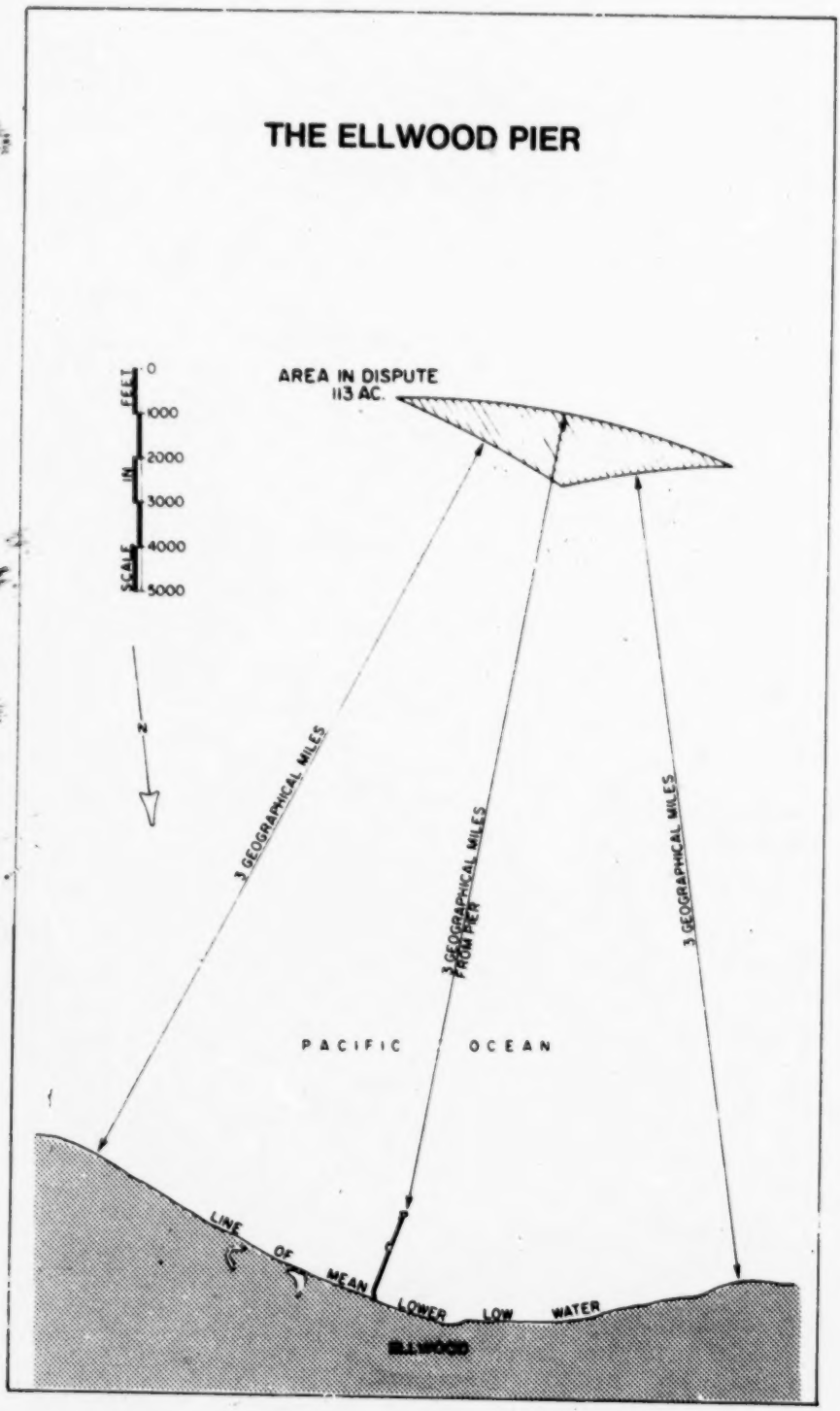
THE ELLWOOD PIER
AREA IN DISPUTE
113 AC.
SCALE IN FEET
0
1000
2000
3000
4000
5000
N
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES
PACIFIC OCEAN
LINE OF MEAN LOWER LOW WATER
ELLWOOD

Figure 6

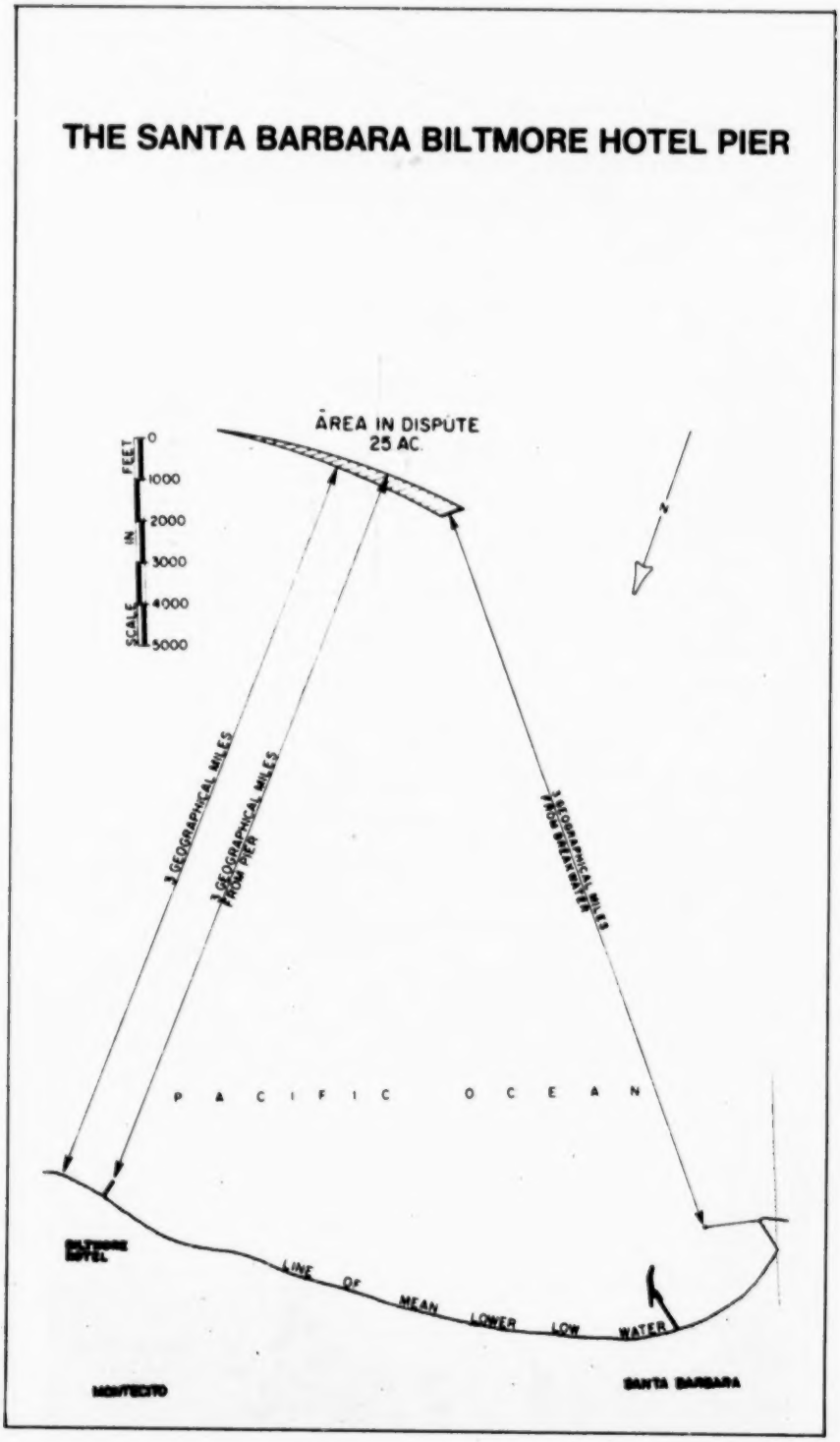
THE SANTA BARBARA BILTMORE HOTEL PIER
AREA IN DISPUTE
25 AC.
SCALE IN FEET
0
1000
2000
3000
4000
5000
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES FROM BREAKWATER
N
P A C I F I C O C E A N
LINE OF MEAN LOWER LOW WATER
MONTECITO
SANTA BARBARA

Figure 7

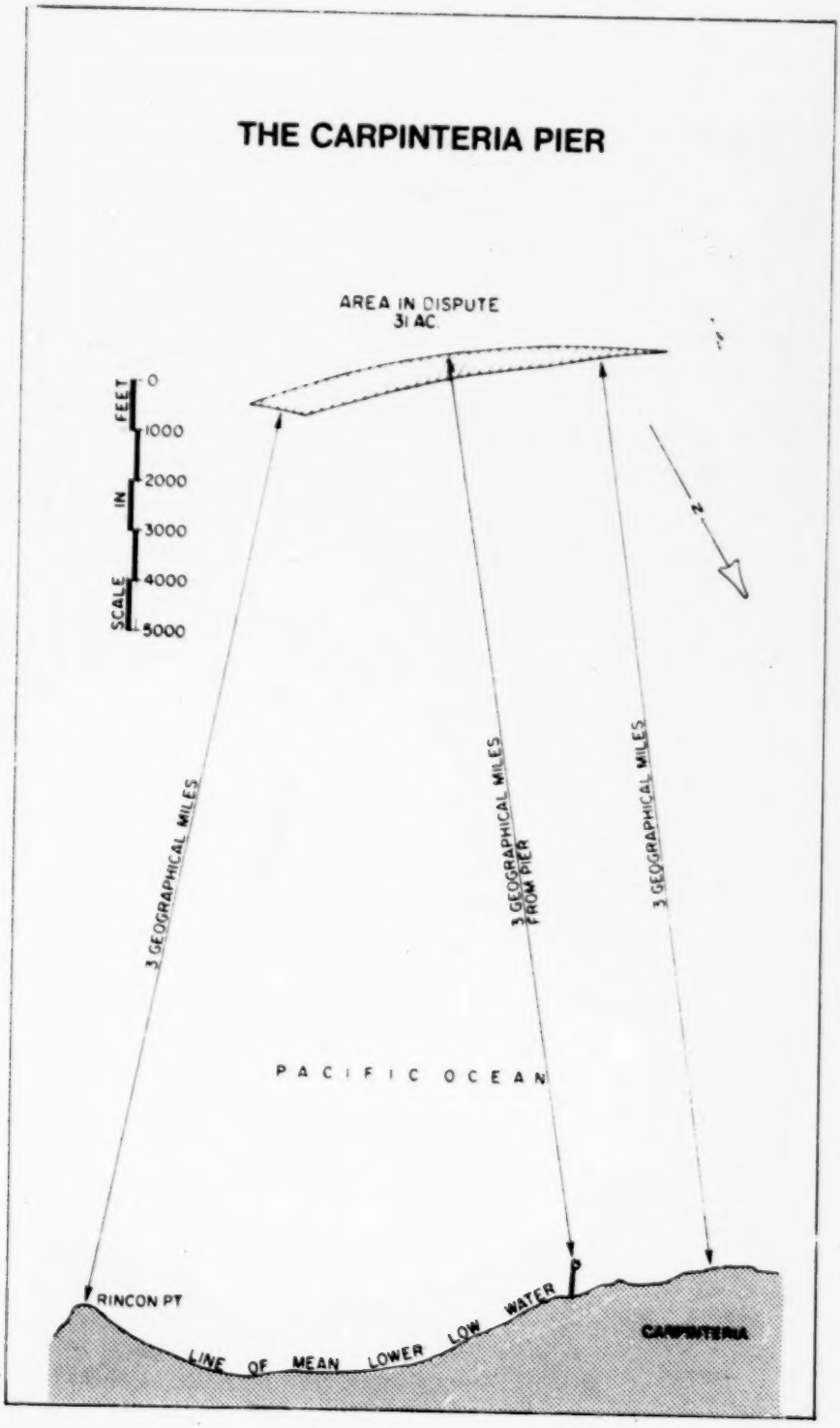
THE CARPINTERIA PIER
AREA IN DISPUTE
31 AC.
SCALE IN FEET
0
1000
2000
3000
4000
5000
N
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES
PACIFIC OCEAN
RINCON PT
LINE OF MEAN LOWER LOW WATER
CARPINTERIA

Figure 8

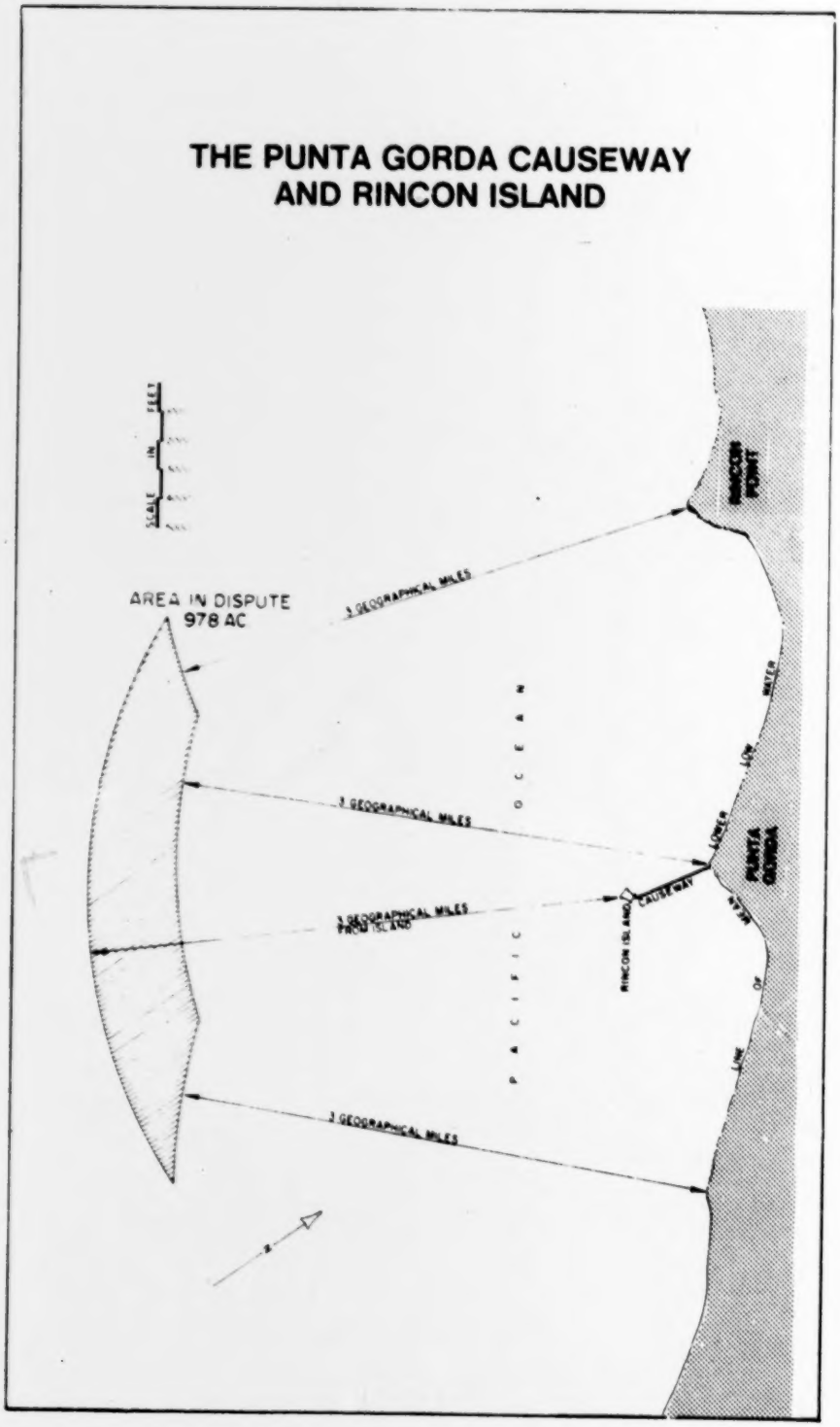
THE PUNTA GORDA CAUSEWAY
AND RINCON ISLAND
SCALE IN FEET
AREA IN DISPUTE
978 AC
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES
FROM ISLAND
3 GEOGRAPHICAL MILES
OCEAN
PACIFIC
RINCON ISLAND
CAUSEWAY
LOW WATER
PUNTA GORDA
LOW WATER

Figure 9

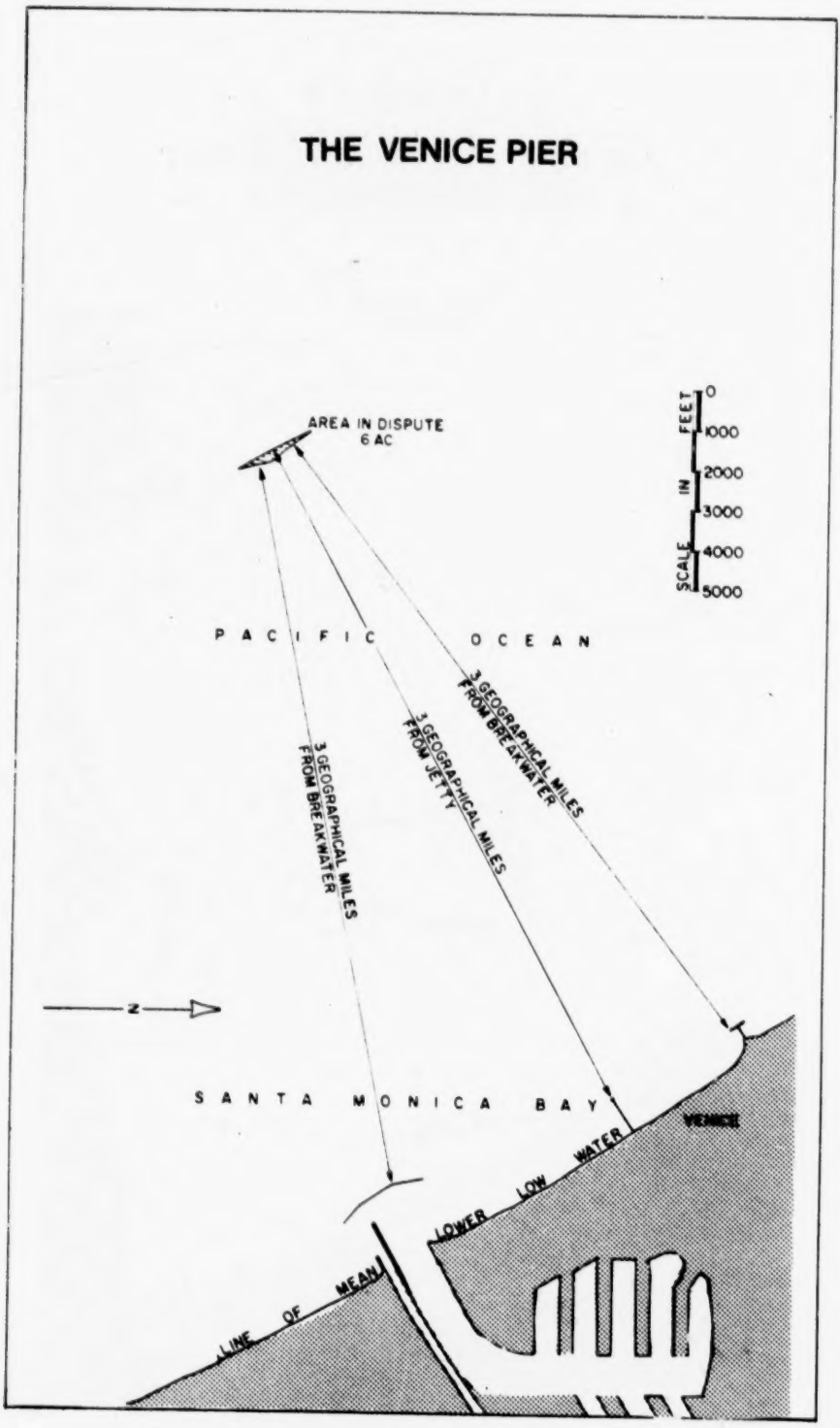
THE VENICE PIER
AREA IN DISPUTE
6 AC
SCALE IN FEET
0
1000
2000
3000
4000
5000
PACIFIC OCEAN
3 GEOGRAPHICAL MILES FROM BREAKWATER
3 GEOGRAPHICAL MILES FROM JETTY
3 GEOGRAPHICAL MILES FROM BREAKWATER
N
SANTA MONICA BAY
VENICE
LOWER LOW WATER
LINE OF MEAN

Figure 10

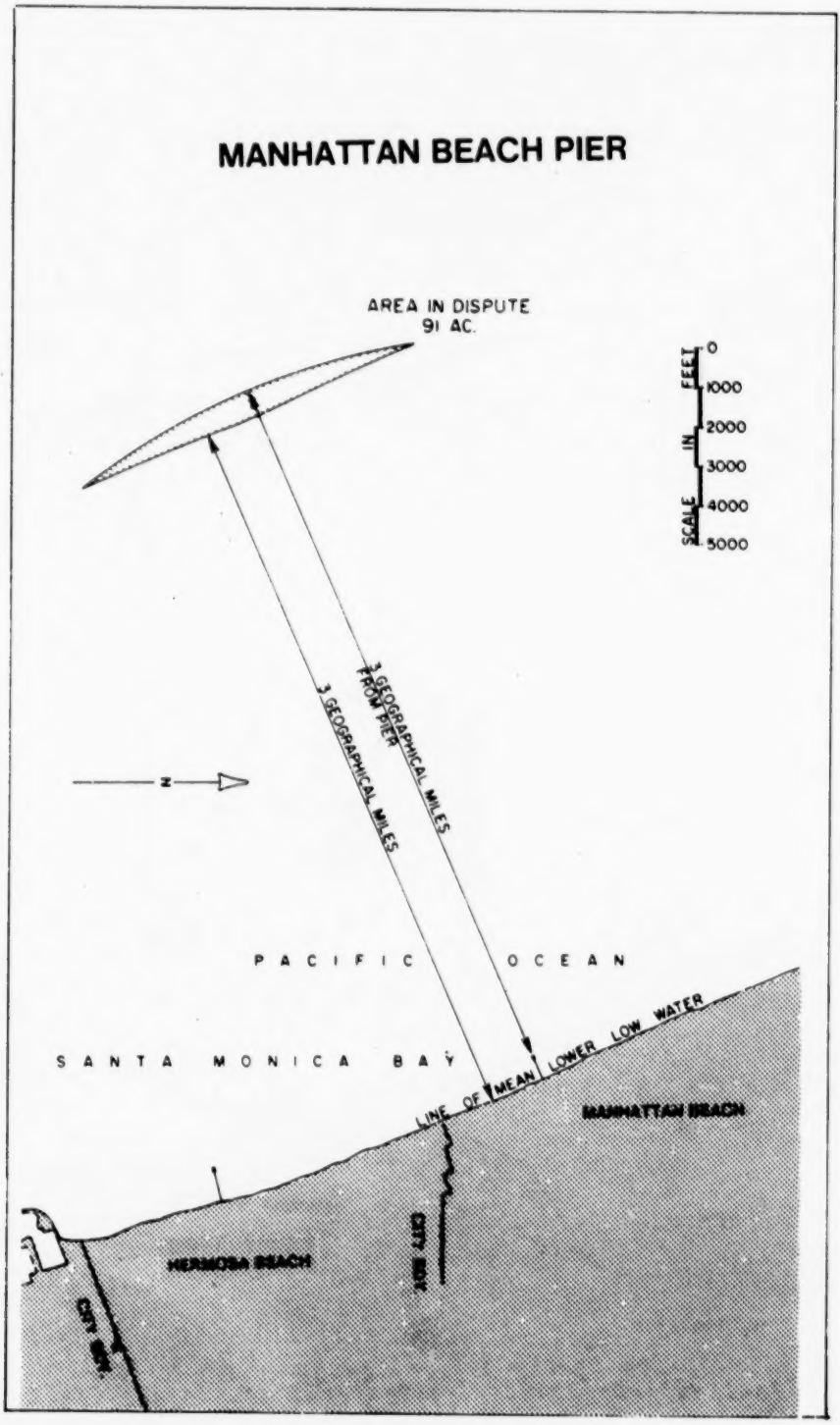
MANHATTAN BEACH PIER
AREA IN DISPUTE
91 AC.
SCALE IN FEET
0
1000
2000
3000
4000
5000
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES
N
PACIFIC OCEAN
SANTA MONICA BAY
LINE OF MEAN LOWER LOW WATER
MANHATTAN BEACH
HERMOSA BEACH
CITY BDY.
CITY BDY.

Figure 11

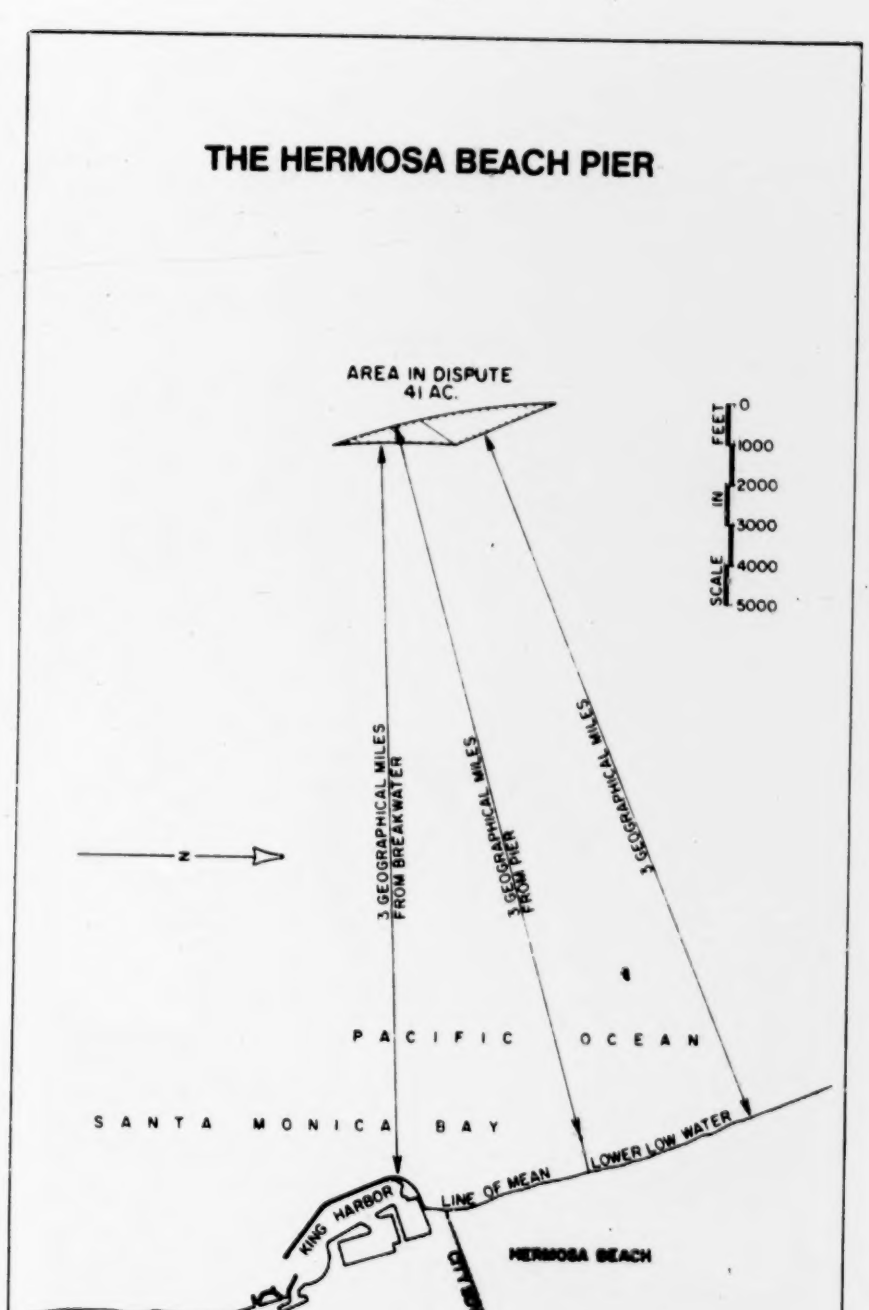
THE HERMOSA BEACH PIER
AREA IN DISPUTE
41 AC.
SCALE IN FEET
0
1000
2000
3000
4000
5000
3 GEOGRAPHICAL MILES FROM BREAKWATER
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES
N
PACIFIC OCEAN
SANTA MONICA BAY
LOWER LOW WATER
LINE OF MEAN
KING HARBOR
HERMOSA BEACH
REDONDO BEACH

Figure 12

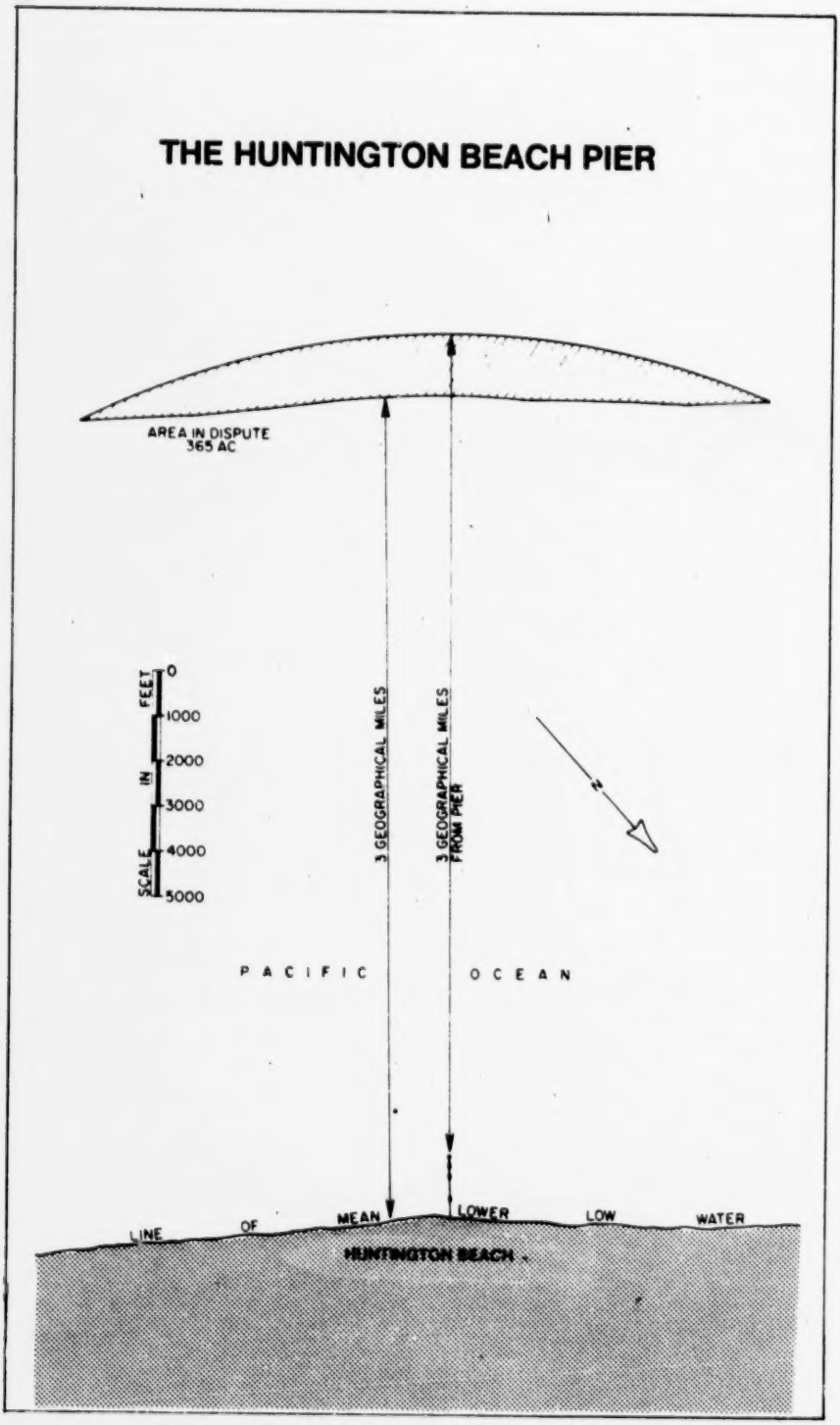
THE HUNTINGTON BEACH PIER
AREA IN DISPUTE
365 AC
SCALE IN FEET
0
1000
2000
3000
4000
5000
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM PIER
N
PACIFIC OCEAN
LINE OF MEAN LOWER LOW WATER
HUNTINGTON BEACH

Figure 13

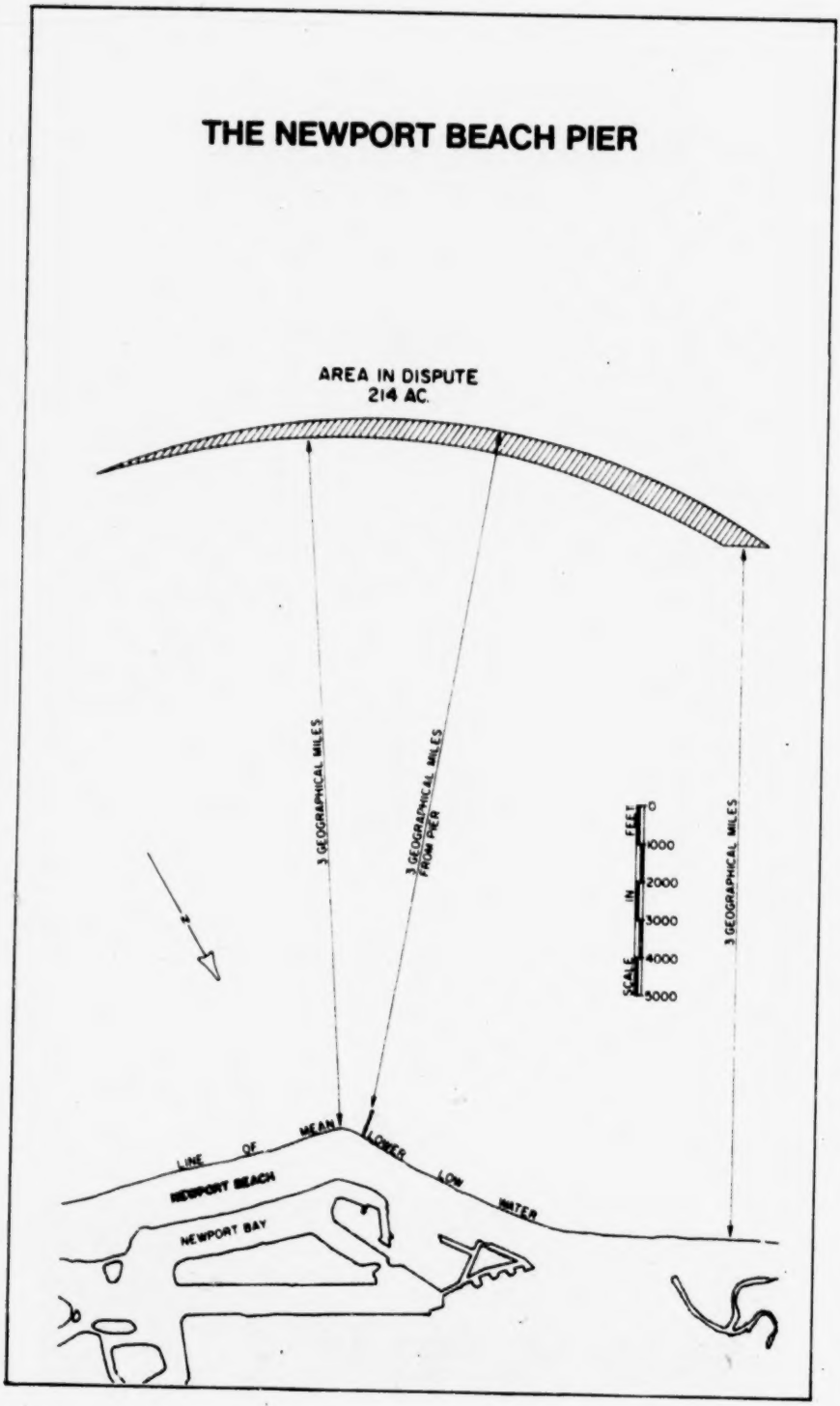
THE NEWPORT BEACH PIER
AREA IN DISPUTE
214 AC.
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES
SCALE IN FEET
0
1000
2000
3000
4000
5000
LINE OF MEAN LOWER LOW WATER
NEWPORT BEACH
NEWPORT BAY

Figure 14

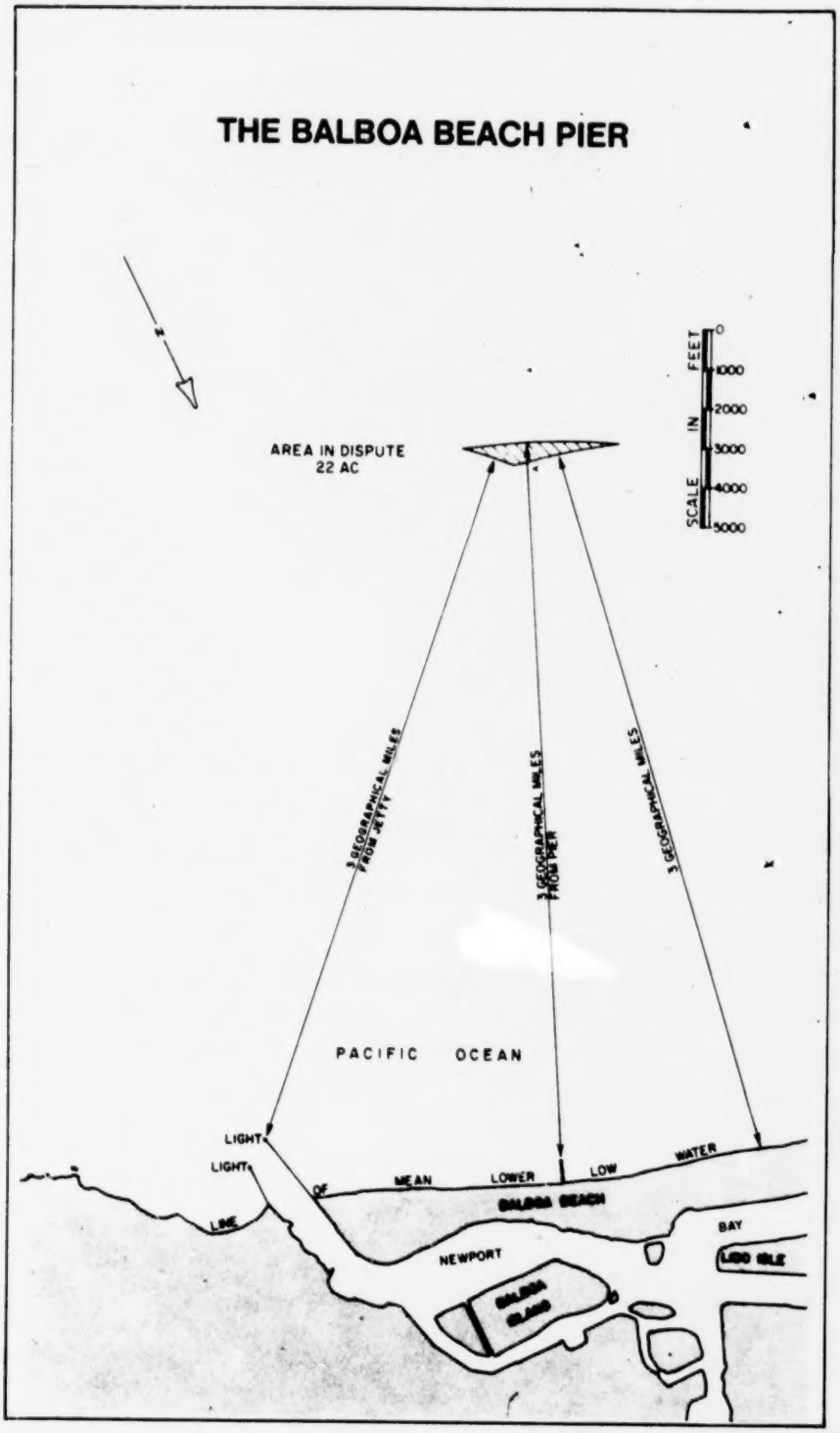
THE BALBOA BEACH PIER
AREA IN DISPUTE
22 AC
SCALE IN FEET
0
1000
2000
3000
4000
5000
3 GEOGRAPHICAL MILES FROM JETTY
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES
PACIFIC OCEAN
LIGHT
LIGHT
LINE
OF MEAN LOWER LOW WATER
BALBOA BEACH
BAY
NEWPORT
LIDO ISLE
BALBOA ISLAND

Figure 15

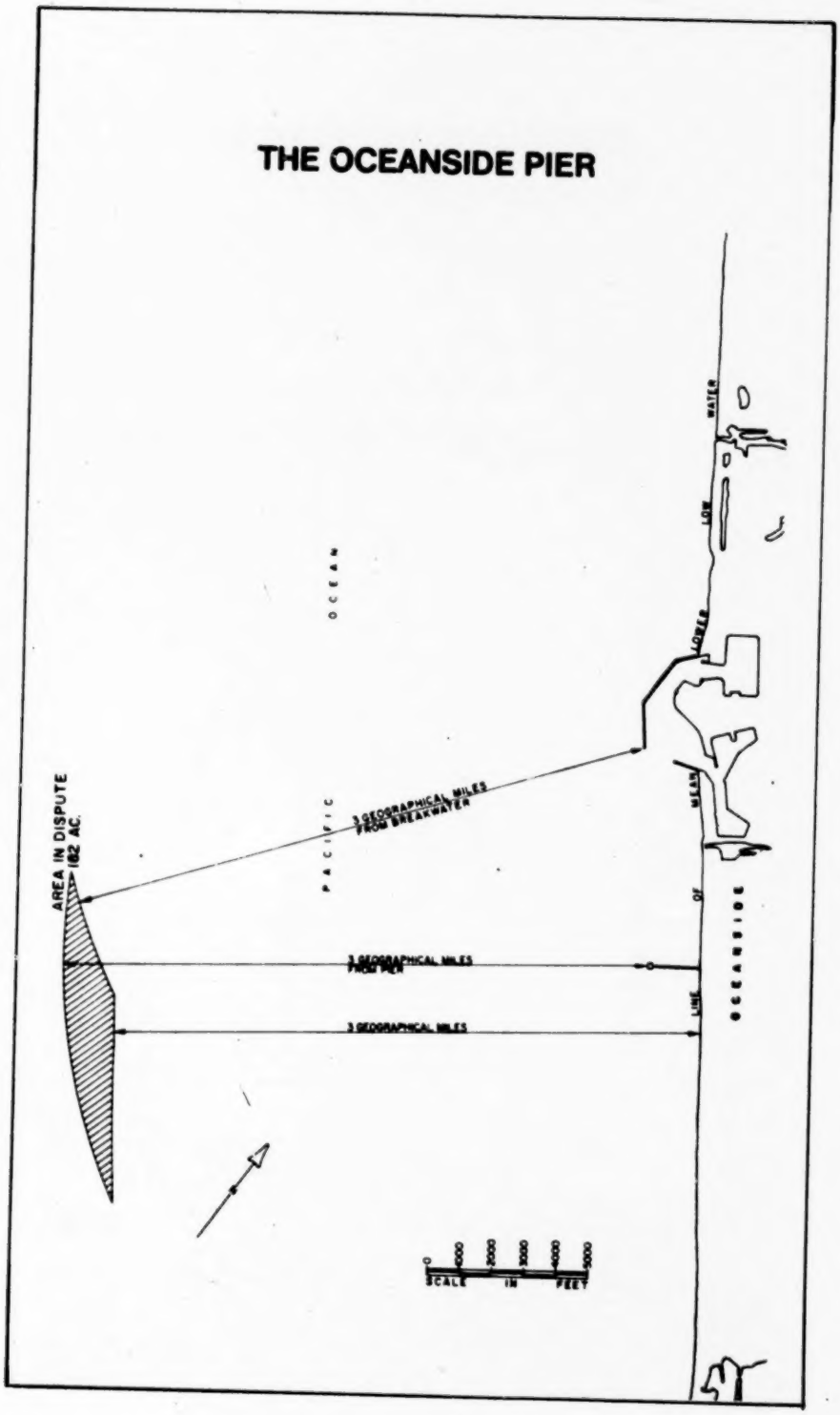
THE OCEANSIDE PIER
OCEAN
PACIFIC
AREA IN DISPUTE
182 AC.
3 GEOGRAPHICAL MILES
FROM BREAKWATER
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES
MEAN LOW WATER LINE OF OCEANSIDE
SCALE IN FEET
0
1000
2000
3000
4000
5000

Figure 16

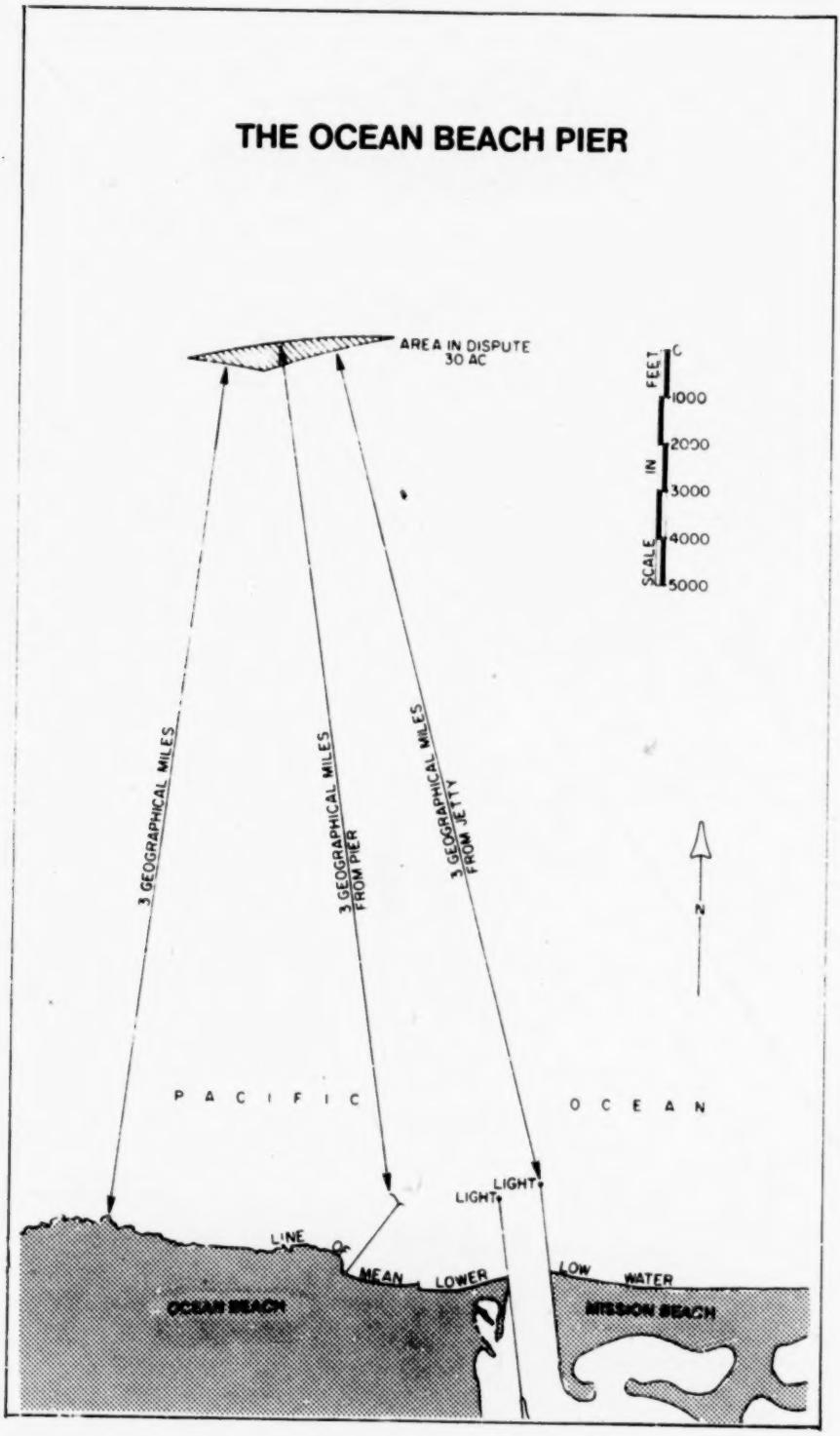
THE OCEAN BEACH PIER
AREA IN DISPUTE
30 AC
SCALE IN FEET
1000
2000
3000
4000
5000
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES FROM JETTY
N
PACIFIC
OCEAN
LIGHT
LIGHT
LINE OF
MEAN
LOWER
LOW
WATER
OCEAN BEACH
MISSION BEACH

Figure 17

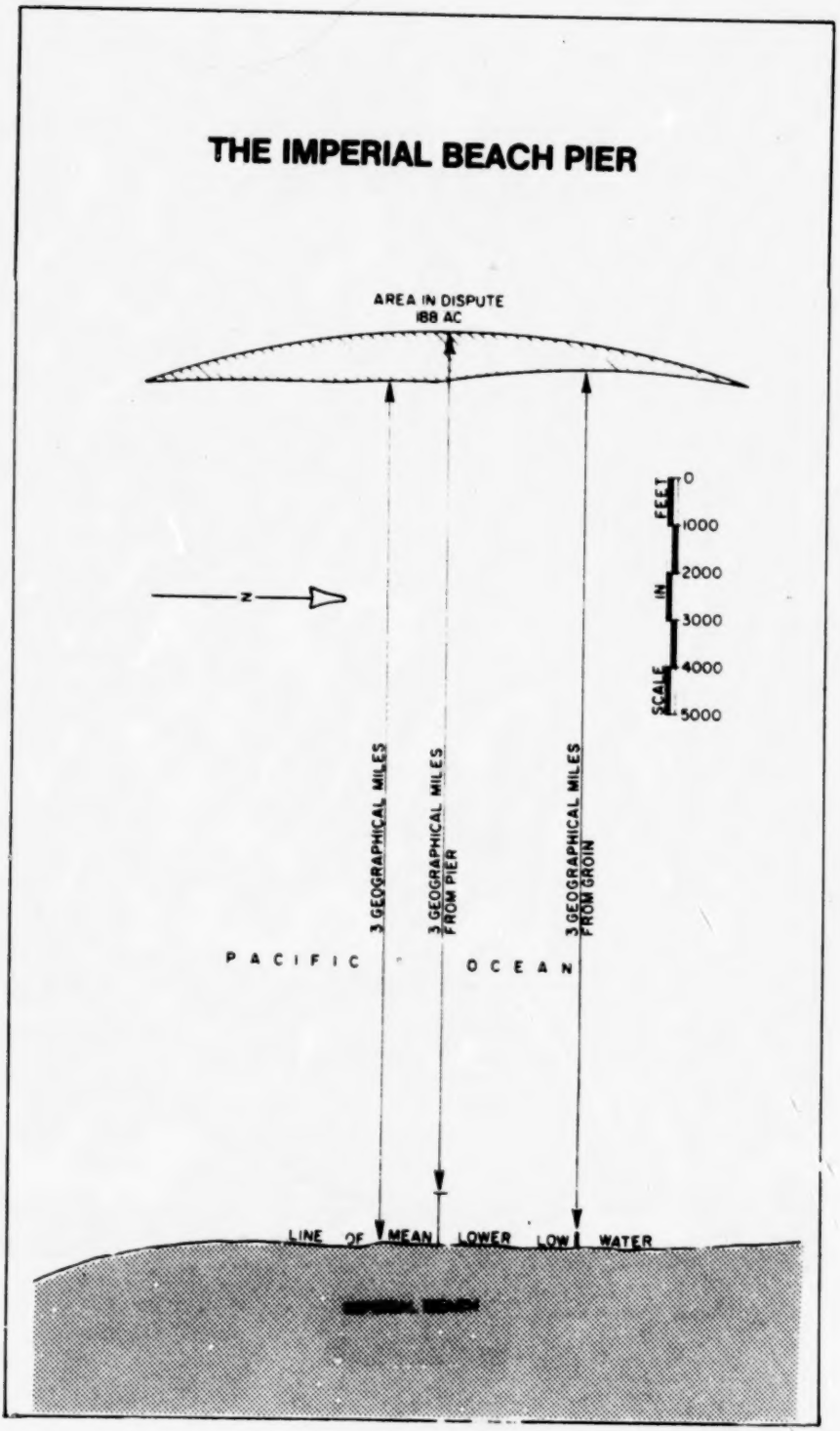
THE IMPERIAL BEACH PIER
AREA IN DISPUTE
188 AC
N
SCALE IN FEET
0
1000
2000
3000
4000
5000
3 GEOGRAPHICAL MILES
3 GEOGRAPHICAL MILES FROM PIER
3 GEOGRAPHICAL MILES FROM GROIN
PACIFIC OCEAN
LINE OF MEAN LOWER LOW WATER

Figure 18